

McADAMS

The John R. McAdams Company, Inc.
2905 Meridian Parkway
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CONTACT

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CLIENT

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RALEIGH, NC 27615
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EMAIL: JHoltvedt@drhorton.com



PROJECT DIRECTORY

OWNER
CHAMBLEE, R M HEIRS
C/O JIM EDWARDS
2711 ROYSTER STREET
RALEIGH, NC 27608

DORY MEADOWS

1509 CHAMBLEE ROAD
ZEBULON, NORTH CAROLINA

CONCEPT PLAN

PROJECT NUMBER: DRH-22004

DATE: NOVEMBER 1, 2022

SHEET INDEX

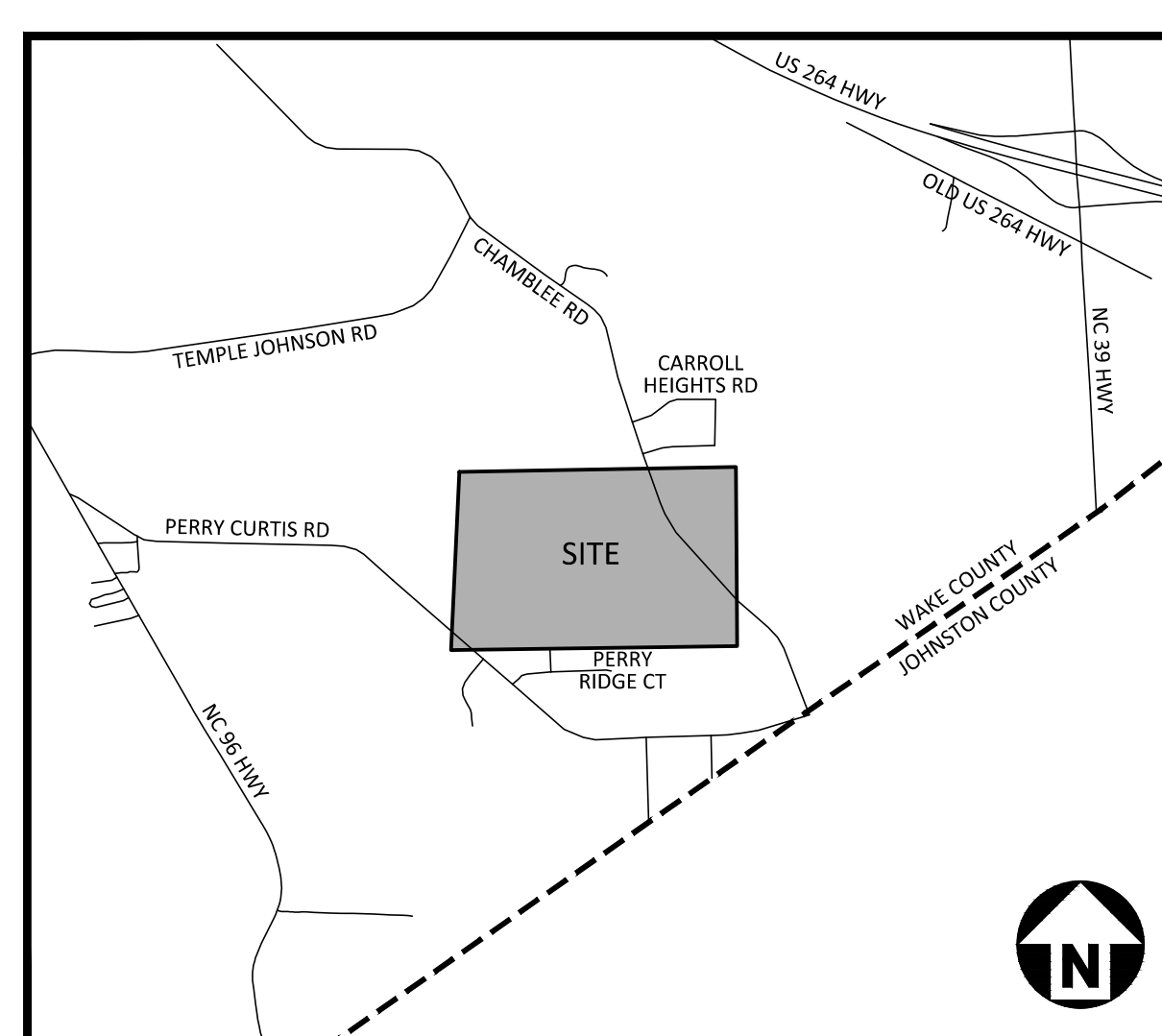
C1.00	EXISTING CONDITIONS
C2.00	SITE PLAN
C3.00	GRADING PLAN
C4.00	UTILITY PLAN
C8.00	SITE DETAILS
L5.00	LANDSCAPE PLAN
L5.01	LANDSCAPE NOTES & DETAILS

WATER ALLOCATION POINTS

POINTS	ITEM
10	BASE POINTS
10	CONSERVATION OF NATURAL HABITAT
5	ON-STREET PARKING
5	FOUNTAIN IN SCM FOR "OUTDOOR ENHANCEMENT"
10	ARCHITECTURAL STANDARDS
3	CLUBHOUSE WITH BATHROOMS - NO MEETING SPACE
2	RESORT STYLE POOL
1	DECK OR PATIO
2	WATER PLAY APPARATUS IN POOL
4	PEMA PLAYGROUND
3	POLLINATOR GARDEN 225 SF MINIMUM
5	8,000 SF MINIMUM POCKET PARK
60	TOTAL POINTS

SITE DATA

PIN	2715-10-1559
REAL ESTATE ID	0012701
SITE AREA	136.00 AC
RIVER BASIN	NEUSE
WATERSHED	MOCCASIN CREEK
EXISTING ZONING	R-30
PROPOSED ZONING	PLANNED DEVELOPMENT (R4 BASE)
PROPOSED USES	SINGLE FAMILY DETACHED AND TOWNHOUSES INCLUDING ACCESSORY USES
DENSITY	362 UNITS / 136.00 AC = 2.66 DU/AC
TREE SAVE	REQUIRED 136.00 AC x 5% = 6.80 AC
	PROVIDED 10.00 AC MINIMUM
OPEN SPACE	REQUIRED 136.00 AC x 10% = 13.60 AC
	PROVIDED 53.70 AC - PASSIVE
	3.50 AC - ACTIVE
	57.20 AC - TOTAL
ACTIVE OPEN SPACE	REQUIRED 136.00 AC x 2.5% = 3.40 AC
	PROVIDED 3.50 AC
GUEST PARKING	REQUIRED 362 UNITS x 0.25 SPACES/UNIT = 91 SPACES
	PROVIDED 91 SPACES



VICINITY MAP
N.T.S.



REVISIONS

NO. DATE

CONCEPT PLAN FOR:

DORY MEADOWS
ZEBULON, NORTH CAROLINA
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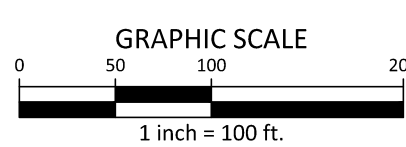
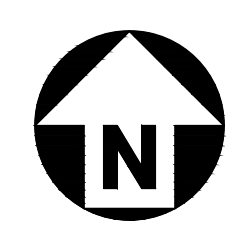
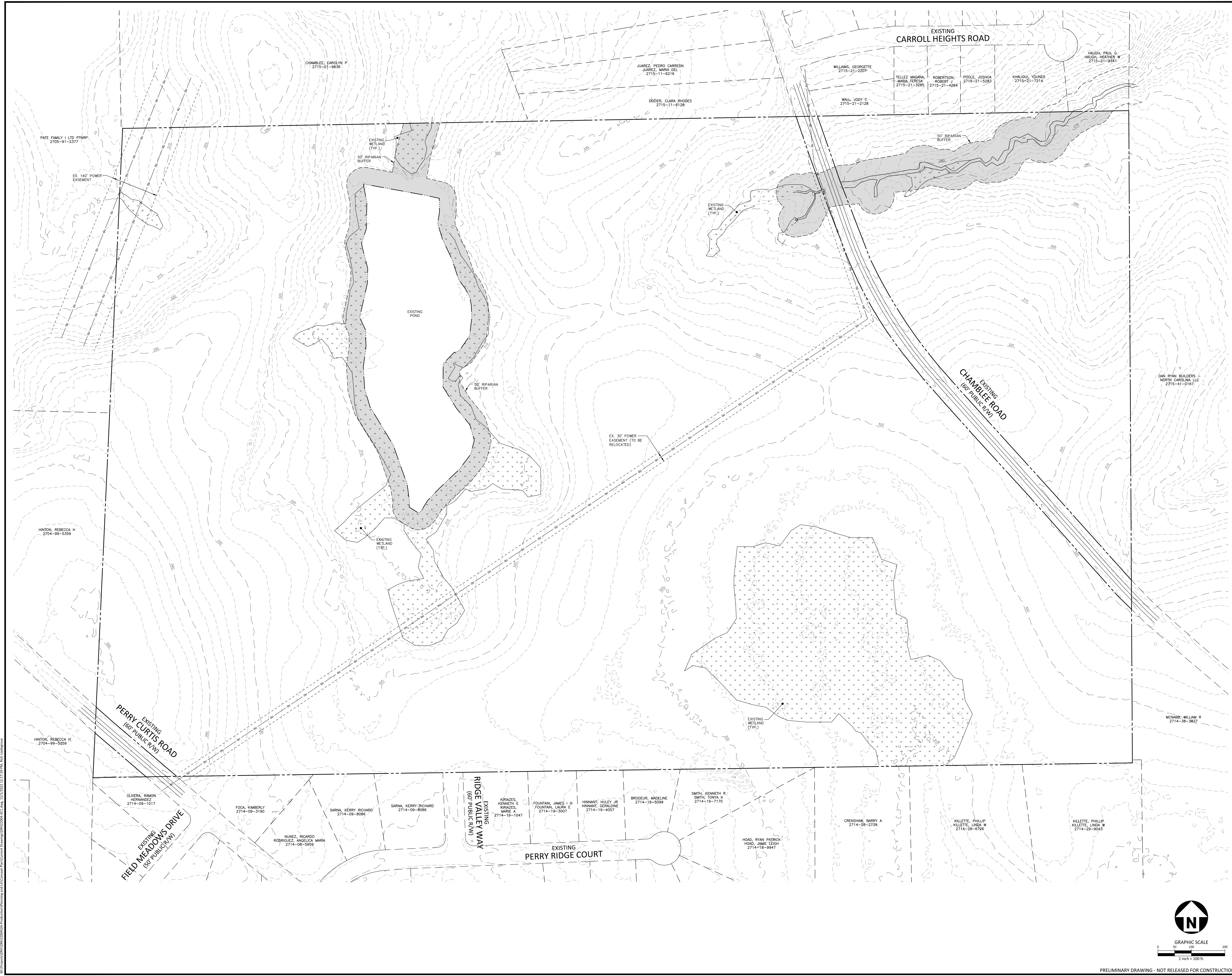
PLAN INFORMATION

PROJECT NO. DRH-22004
FILENAME DRH22004-XC1
CHECKED BY RCA
DRAWN BY RLU
SCALE 1"=100'
DATE 11. 01. 2022

SHEET

EXISTING
CONDITIONS

C1.00



PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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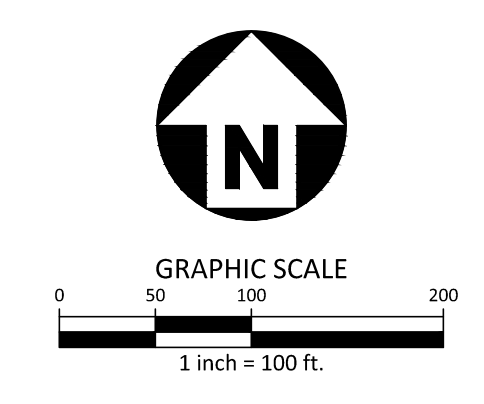
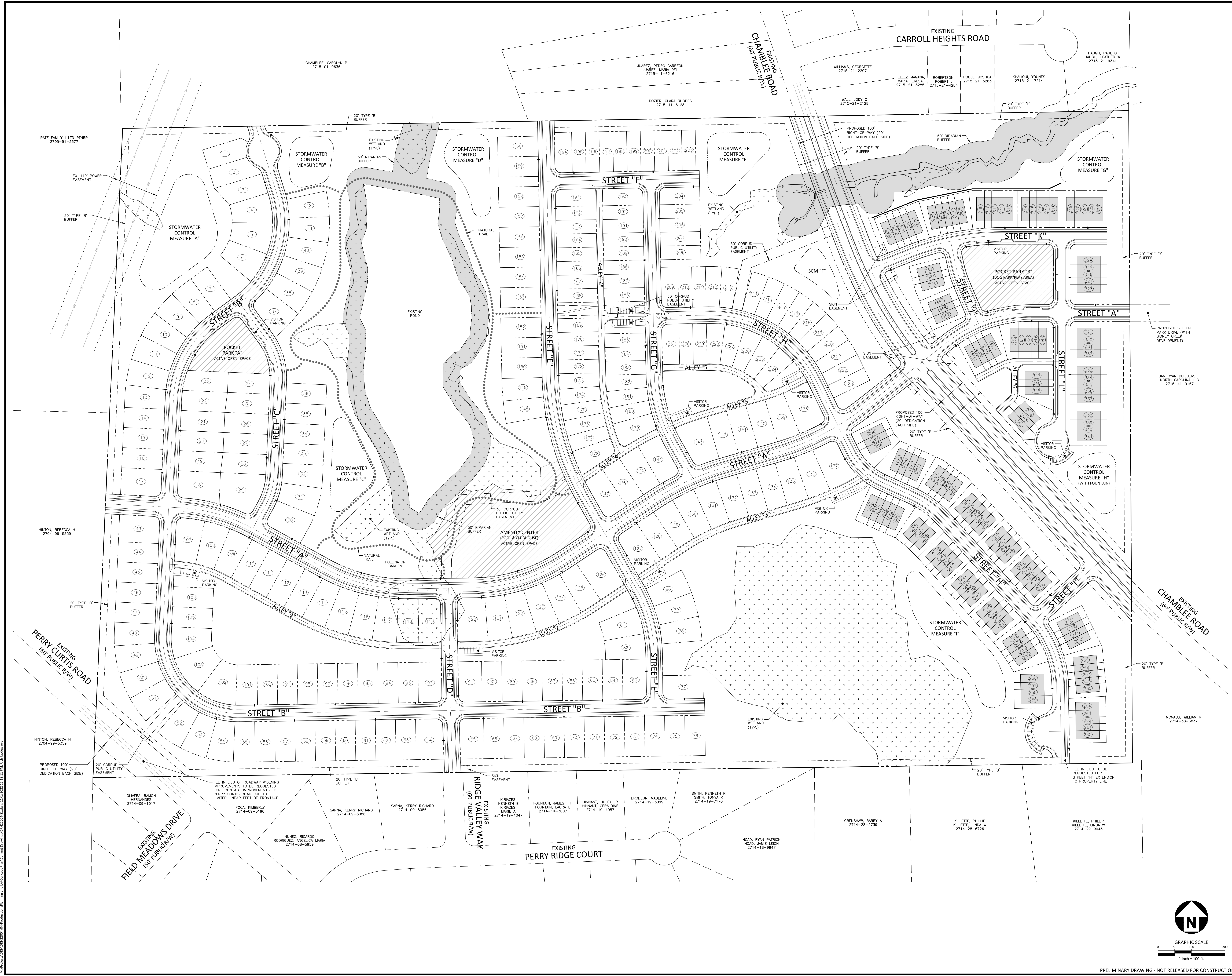
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SHEET

SITE PLAN
C2.00



PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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America's Builder

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REVISIONS

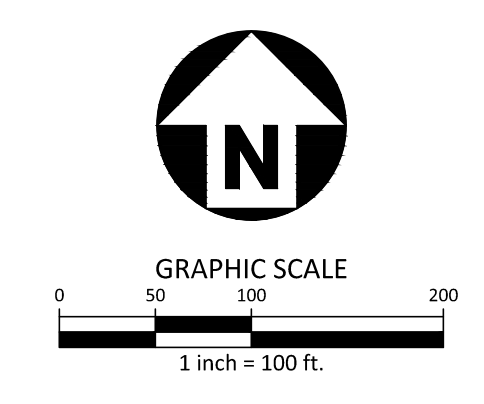
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PROJECT NO. DRH-22004
FILENAME DRH22004-G1
CHECKED BY RCA
DRAWN BY RLU
SCALE 1"=100'
DATE 11. 01. 2022

SHEET

GRADING PLAN
C3.00



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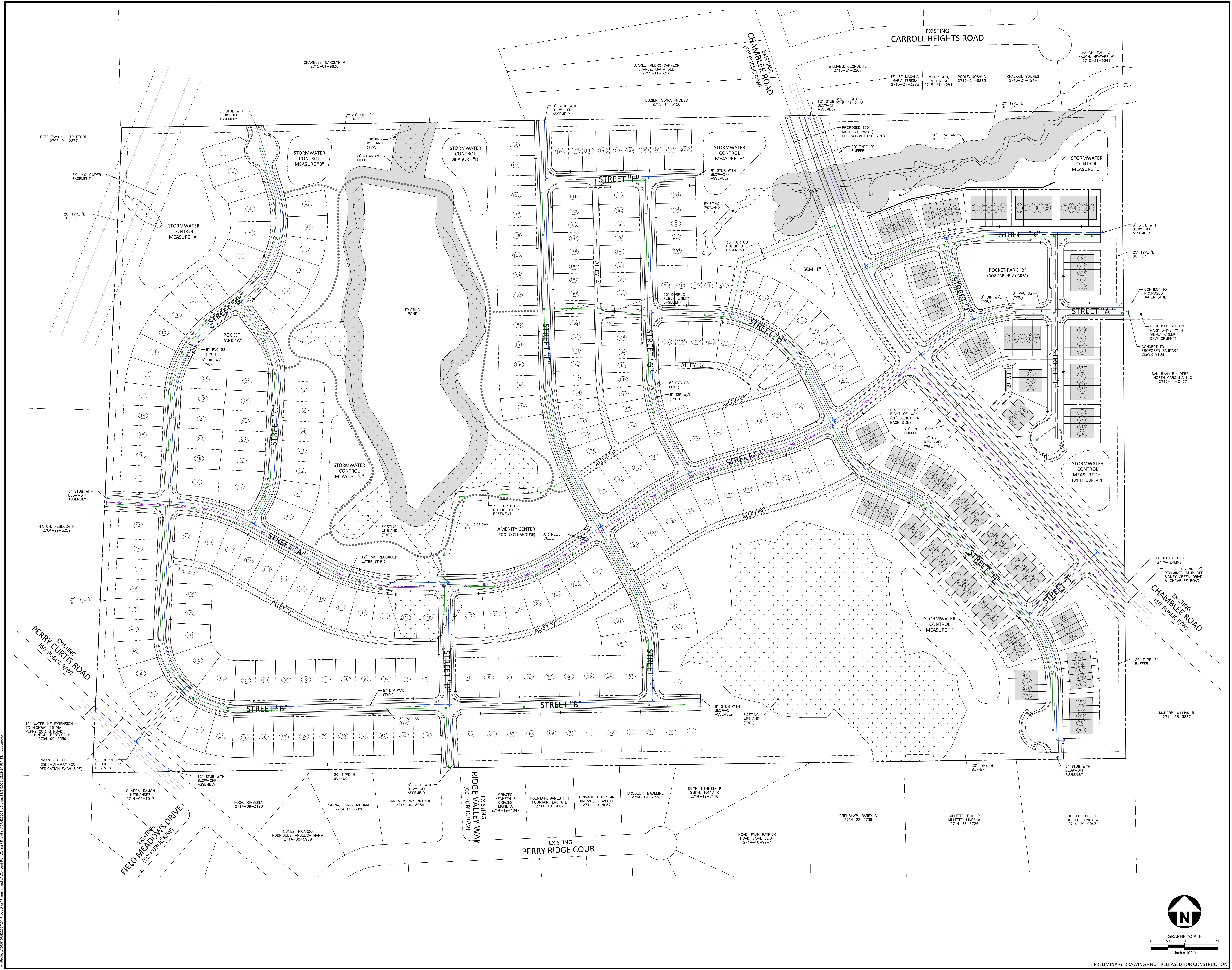
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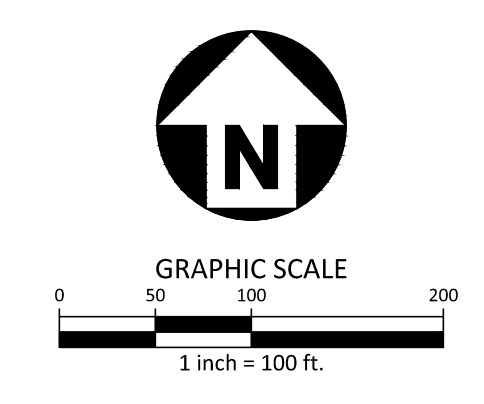
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DATE 11. 01. 2022

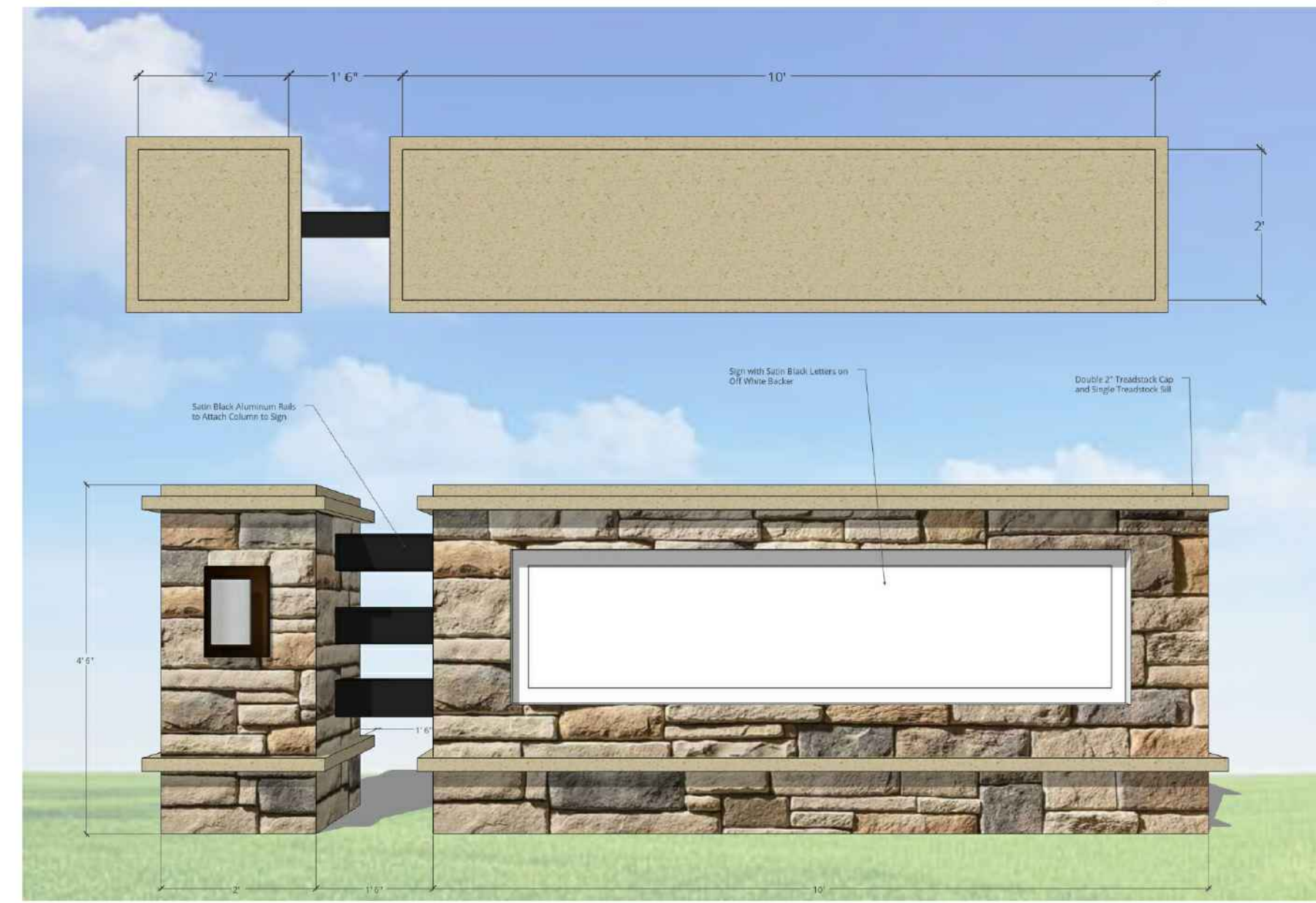
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UTILITY PLAN
C4.00

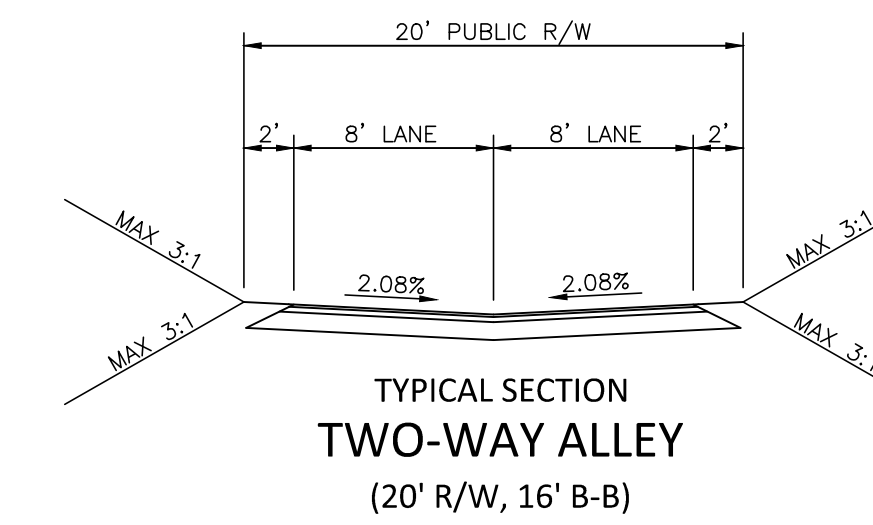
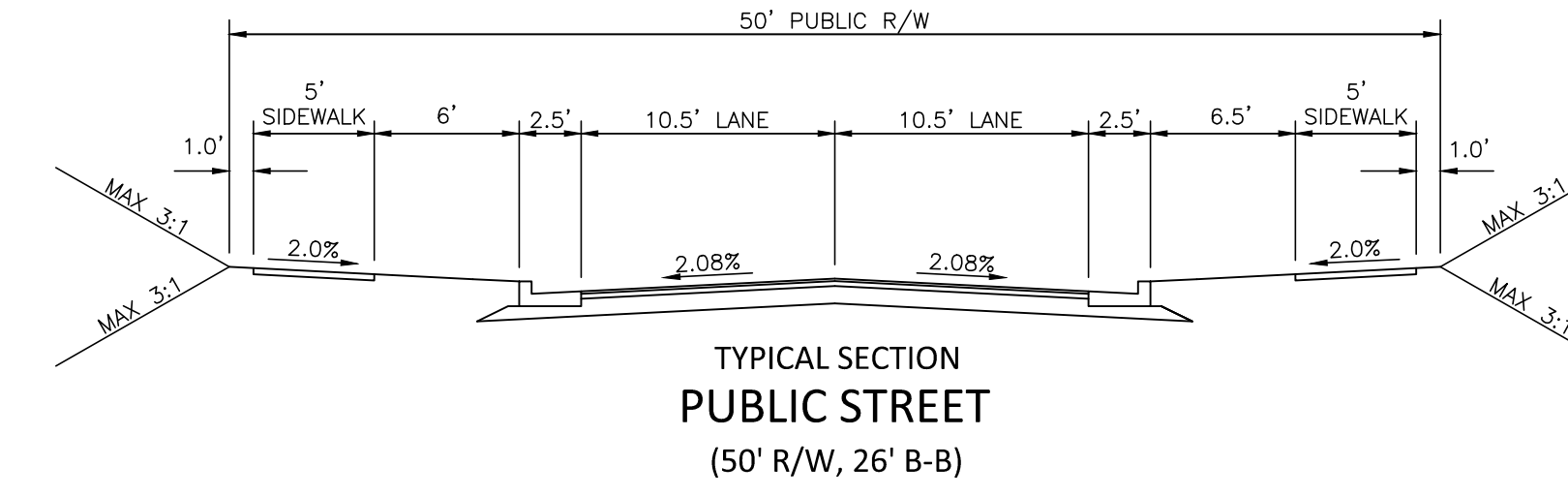
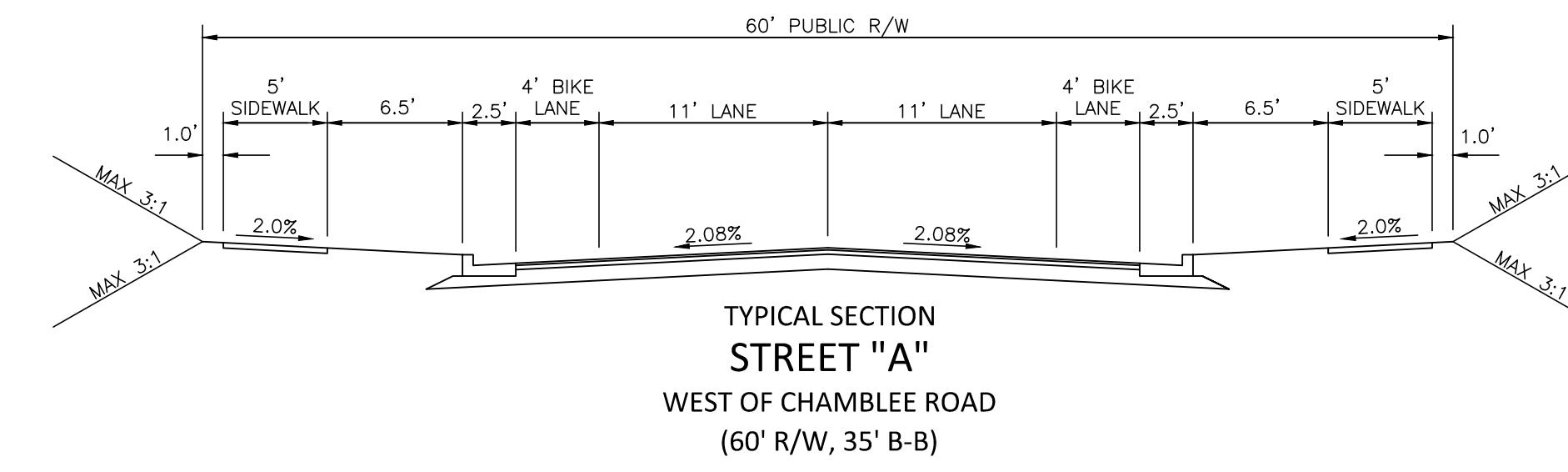
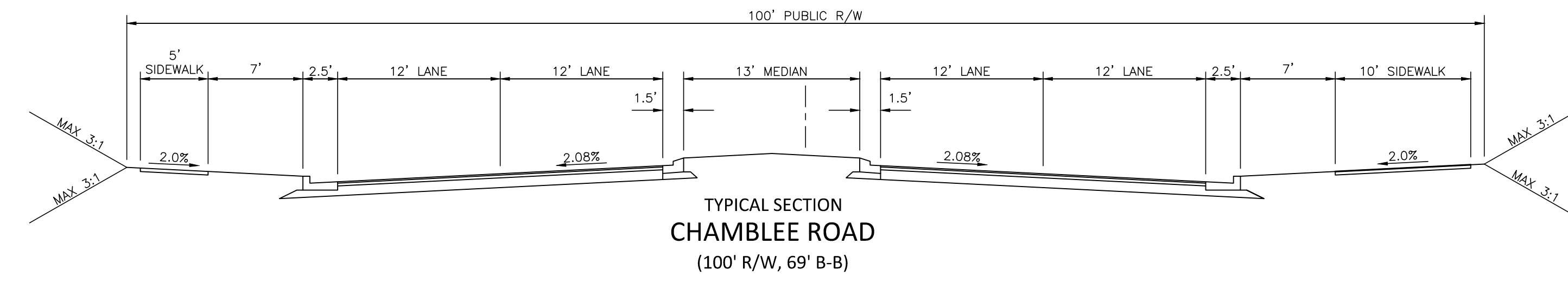


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TYPICAL MONUMENT SIGN
NOT TO SCALE



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PROJECT NO. DRH-22004
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SCALE N/A
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SHEET

SITE DETAILS
C8.00



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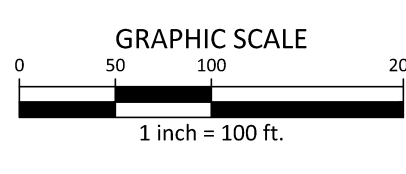
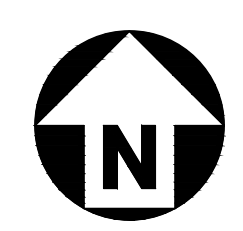
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PLAN INFORMATION

PROJECT NO. DRH-22004
FILENAME DRH22004-L51
CHECKED BY SRD
DRAWN BY CMXY
SCALE 1"=100'
DATE 11. 01. 2022

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LANDSCAPE PLAN
L5.00



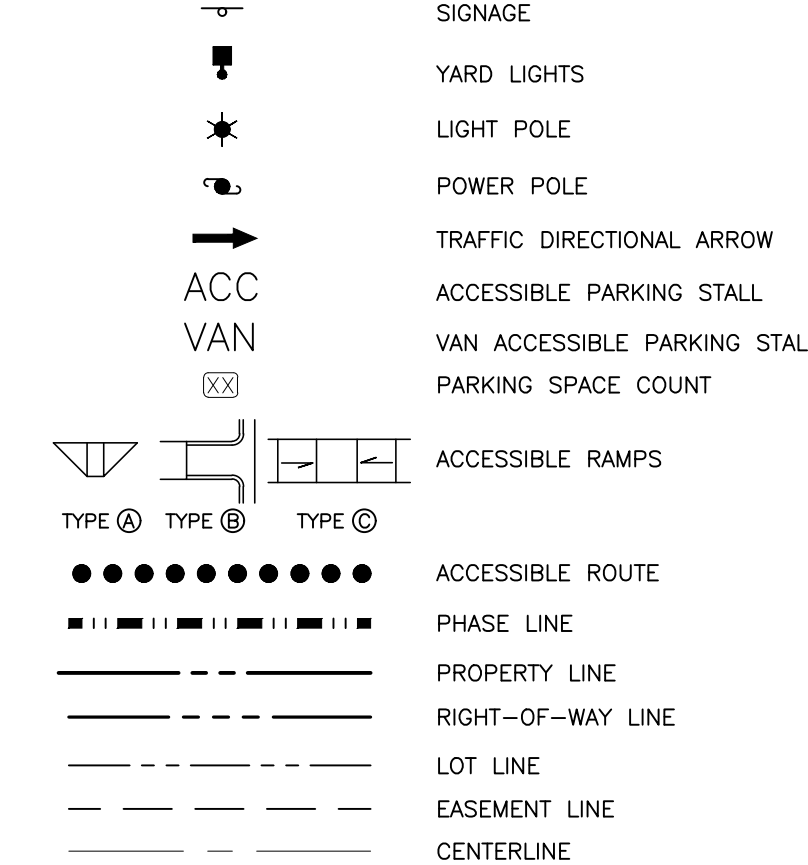
PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



PLANT SCHEDULE OVERALL LANDSCAPE PLAN

CANOPY TREES	CODE	COMMON NAME	BOTANICAL NAME
	ARO	October Glory Maple	Acer rubrum 'October Glory' TM
	QAW	White Oak	Quercus alba
	QCS	Scarlet Oak	Quercus coccinea
	QLO	Overcup Oak	Quercus lyrata
	QNN	Nuttall Oak	Quercus nuttallii
	QPW	Willow Oak	Quercus phellos
	QUP	American Elm	Ulmus americana 'Princeton'
	QUPC	Chinese Elm	Ulmus parvifolia
	ZSG	Sawleaf Zelkova	Zelkova serrata 'Green Vase'
EVERGREEN SHRUBS	CODE	COMMON NAME	BOTANICAL NAME
	AGEG	Glossy Abelia	Abelia x grandiflora 'Edward Goucher'
	ICCC	Carissa Holly	Ilex cornuta 'Carissa'
	ICCD	Dwarf Japanese Holly	Ilex crenata 'Compacta'

SITE LEGEND



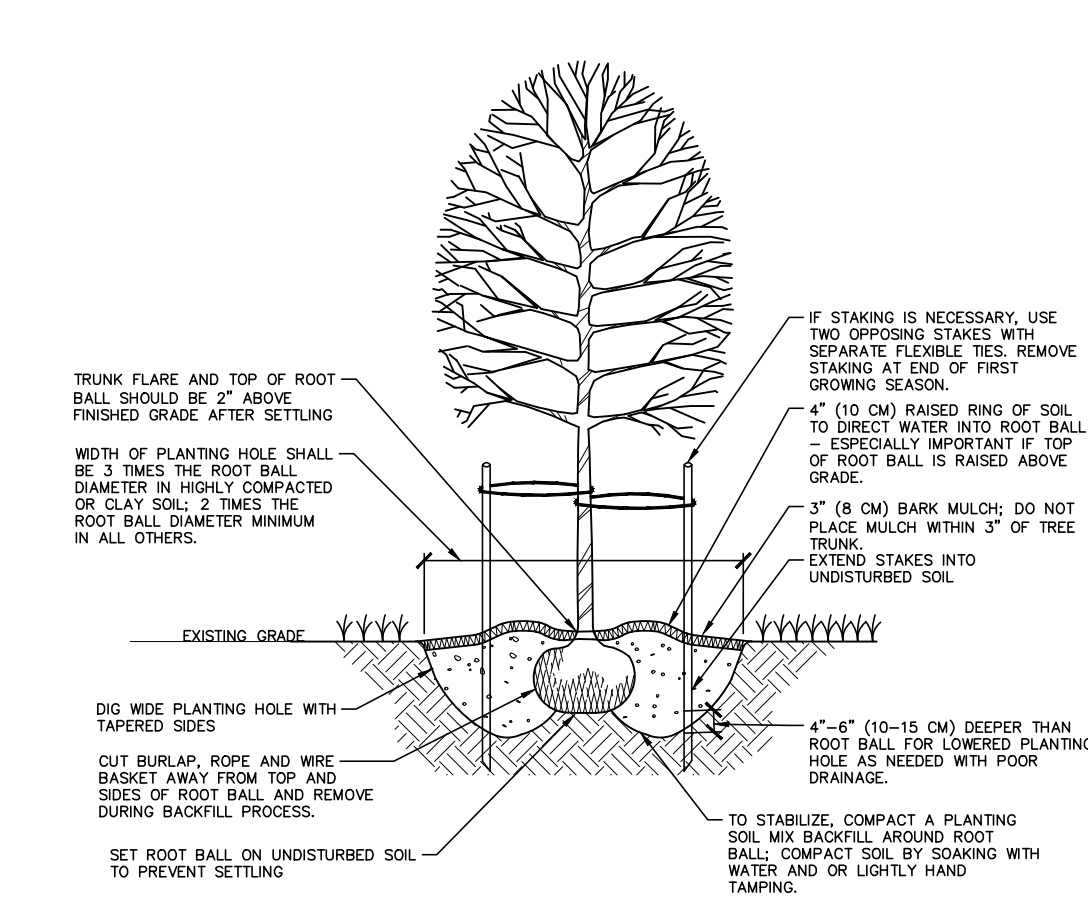
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GENERAL LANDSCAPE NOTES:

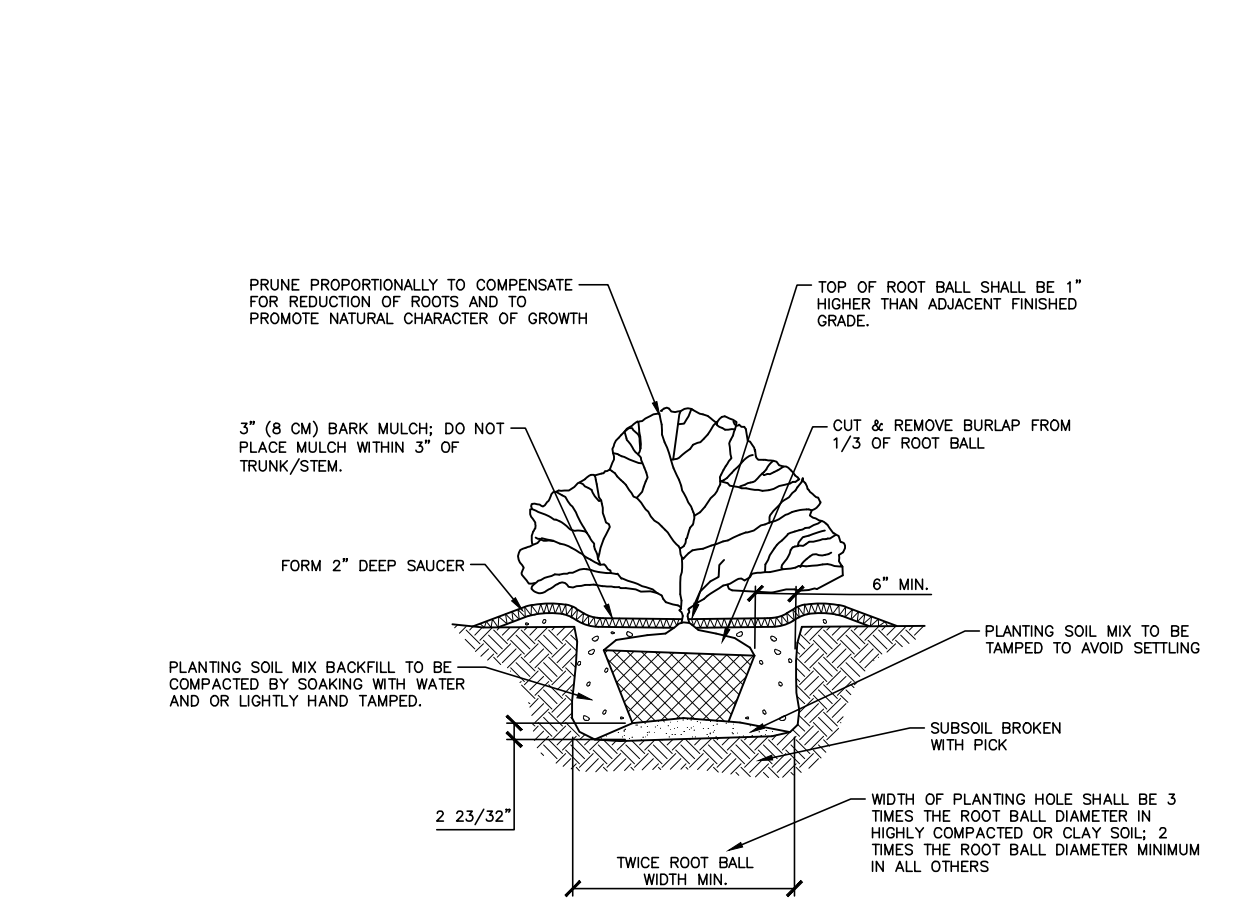
1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF ZEBULON AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR THE SITE INSPECTION BEFORE LANDSCAPE CONSTRUCTION AND INSTALLATION IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS.
3. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE BEGINNING DEMOLITION OR INSTALLATION.
4. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE NOTES, SPECIFICATIONS, DRAWINGS OR SITE CONDITIONS FOR RESOLUTION PRIOR TO INSTALLATION.
5. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. THIS PLAN IS FOR PLANTING PURPOSES ONLY. FOR INFORMATION REGARDING BUILDINGS, GRADING, WALLS, ETC., REFER TO ARCHITECTURE, SITE AND GRADING PLANS.
7. VERIFICATION OF TOTAL PLANT QUANTITIES AS SHOWN IN THE PLANT SCHEDULE SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
8. CONTRACTOR TO ENSURE PROPER STABILIZATION AND SEEDING OF THE SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.
9. LANDSCAPE MATERIAL SHALL BE WELL FORMED, VIGOROUS, GROWING SPECIMENS WITH GROWTH TYPICAL OF VARIETIES SPECIFIED AND SHALL BE FREE FROM DAMAGE, INSECTS AND DISEASES. MATERIAL SHALL EQUAL OR SURPASS IN QUALITY AS DEFINED IN THE CURRENT ISSUE OF "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
10. ALL PLANT MATERIAL IS TO BE CAREFULLY HANDLED BY THE ROOT BALL, NOT THE TRUNK, BRANCHES AND/OR FOLIAGE OF THE PLANT. MISHANDLED PLANT MATERIAL MAY BE REJECTED BY THE LANDSCAPE ARCHITECT.
11. ALL PLANT MATERIAL IS TO BE WELL ROOTED, NOT ROOT BOUND, SUCH THAT THE ROOT BALL REMAINS INTACT THROUGHOUT THE PLANTING PROCESS. DEFICIENT PLANT MATERIAL MAY BE REJECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
12. ALL PLANTS TO BE A MINIMUM OF WHAT IS SPECIFIED IN THE PLANT SCHEDULE. ANY CHANGES OR SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT AND GOVERNING JURISDICTION PRIOR TO ANY HOLE BEING DUG.
13. CONTRACTOR TO COORDINATE WITH OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT TO ESTABLISH THE EXTENTS OF MULCH/SEED/SOD IF NOT SPECIFICALLY SHOWN ON PLANS.
14. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN ALL PLANTING AREAS.
15. PROPOSED TREES TO BE PLANTED A MINIMUM 10 FEET FROM ANY LIGHT POLE AS MEASURED FROM TRUNK OF THE TREE TO THE POLE.
16. PROPOSED TREES TO BE PLANTED A MINIMUM 5 FEET FROM ANY FIRE HYDRANT AS MEASURED FROM TRUNK OF THE TREE TO THE HYDRANT.
17. CONTRACTOR SHALL COMPLETE SOIL TEST IN ALL PLANTING AREAS TO DETERMINE SOIL AMENDMENT REQUIREMENTS UNLESS WAIVED BY OWNER'S REPRESENTATIVE. CONTRACTOR SHALL ADJUST PH AND FERTILITY BASED UPON THE SOIL TEST RESULTS.
18. TOPSOIL SHALL BE FREE OF MATERIAL LARGER THAN 1.0 INCH IN DIAMETER OR LENGTH AND SHALL NOT CONTAIN SLAG, CINDERS, STONES, LUMPS OF SOIL, STICKS, ROOTS, TRASH, OR OTHER EXTRANEIOUS MATERIAL.
19. LOOSEN SUBGRADE / SURFACE SOIL TO A MINIMUM DEPTH OF 6 INCHES. APPLY SOIL AMENDMENTS AND FERTILIZERS AS REQUIRED BY THE SOIL TEST RESULTS TO ACHIEVE A HEALTHY GROWING MEDIA AND MIX THOROUGHLY INTO TOP 4 INCHES OF SOIL. SPREAD PLANTING SOIL MIX TO A DEPTH OF 6 INCHES BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLEMENT. DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
20. IF IMPORTED TOPSOIL IS REQUIRED, THE SUBGRADE SHALL BE SCARIFIED OR TILLED TO A DEPTH OF AT LEAST 6 INCHES PRIOR TO INSTALLATION OF IMPORTED TOPSOIL. FOLLOWING INSTALLATION OF IMPORTED TOPSOIL, THE TOPSOIL SHALL BE TILLED TO INTEGRATE THE SOIL PROFILES.
21. PLANT MATERIALS ARE TO BE GUARANTEED FOR A PERIOD OF 12 MONTHS. PLANT MATERIALS WHICH REMAIN UNHEALTHY WILL BE REPLACED BY THE LANDSCAPE CONTRACTOR BEFORE THE EXPIRATION OF THE GUARANTEE PERIOD OR IMMEDIATELY IF SO DIRECTED BY THE OWNER'S REPRESENTATIVE OR LANDSCAPE ARCHITECT.
22. ALL TREE PLANTINGS SHALL BE MULCHED TO A DEPTH OF 3 INCHES, AND WITH A MINIMUM 3 FOOT RADIUS FROM BASE OF TREE OR TO DRIPLINE. MULCH SHALL BE FREE OF TRASH AND MAINTAINED WEED FREE. MULCH SHALL NOT COVER THE ROOT FLARE. CONFIRM MULCH SPECIFICATIONS WITH OWNER'S REPRESENTATIVE OR LANDSCAPE ARCHITECT.
23. DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SCALD, DRYING, SMELTING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERING ON EXTERIOR PLANTS DURING DELIVERY. DO NOT DROP EXTERIOR PLANTS DURING DELIVERY AND HANDLING.
24. DELIVER EXTERIOR PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND INSTALL IMMEDIATELY. IMMEDIATELY AFTER UNLOADING, STAND THE TREES UP TO REDUCE THE RISK OF SUNSCALD. PROPERLY STAGED TREES ARE STANDING, UNTIED AND SPACED, UNLESS IMMEDIATELY INSTALLED. SET EXTERIOR PLANTS AND TREES IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.
25. SEE LANDSCAPE DETAILS FOR TREE STAKING REQUIREMENTS.
26. EXCAVATE EDGES OF ALL PLANTING BEDS TO 2 INCH DEPTH TO FORM A NEAT AND CRISP DEFINITION.
27. CONTRACTOR SHALL REMOVE DEBRIS AND FINE GRADE ALL PLANTING AREAS PRIOR TO INSTALLATION.
28. REMOVE GUY WIRES AND STAKES AT END OF WARRANTY PERIOD OR ESTABLISHMENT.
29. FINISH GRADING. GRADE PLANTING AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS 1/2 INCH OF FINISH ELEVATION. ROLL AND RAKE. REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADE. LIMIT FINISHED GRADING TO AREAS THAT CAN BE PLANTED IN THE IMMEDIATE FUTURE.

WARRANTY & MAINTENANCE:

1. WARRANTY: INSTALLER SHALL REPAIR OR REPLACE ANY PLANTINGS THAT FAIL IN MATERIALS, WORKMANSHIP, OR GROWTH WITHIN ONE YEAR AFTER THE DATE OF SUBSTANTIAL COMPLETION. FAILURES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
 - DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM LACK OF ADEQUATE MAINTENANCE, NEGLIGENCE, ABUSE BY OWNER, OR INCIDENTS THAT ARE BEYOND CONTRACTOR'S CONTROL.
 - STRUCTURAL FAILURES INCLUDING PLANTINGS FALLING OR BLOWING OVER.
2. MAINTENANCE: INITIAL MAINTENANCE SHALL BE PROVIDED IMMEDIATELY AFTER EACH AREA IS PLANTED AND CONTINUE UNTIL SUBSTANTIAL COMPLETION. UPON SUBSTANTIAL COMPLETION, MAINTENANCE FOR ALL PLANT MATERIAL SHALL BE PROVIDED FOR ONE YEAR AT A MINIMUM SHALL INCLUDE:
 - TREE AND SHRUB MAINTENANCE: MAINTAIN PLANTINGS BY PRUNING, CULTIVATING, WATERING, WEEDING, FERTILIZING, RESTORING PLANTING SAUCERS, AND RESETTling TO PROPER GRADES OR VERTICAL POSITION, AS REQUIRED TO ESTABLISH HEALTHY, VIABLE PLANTINGS. SPRAY OR TREAT AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE.
 - GROUND COVER AND PLANT MAINTENANCE: MAINTAIN AND ESTABLISH PLANTINGS BY WATERING, WEEDING, FERTILIZING, MULCHING, AND OTHER OPERATIONS AS REQUIRED TO ESTABLISH HEALTHY, VIABLE PLANTINGS.
 - PROTECT EXTERIOR PLANTS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES, AND OTHERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR, OR REPLACE DAMAGED PLANTINGS.



01 TREE INSTALLATION
SCALE: 3/8"=1'-0"



02 SHRUB INSTALLATION
SCALE: 3/8"=1'-0"

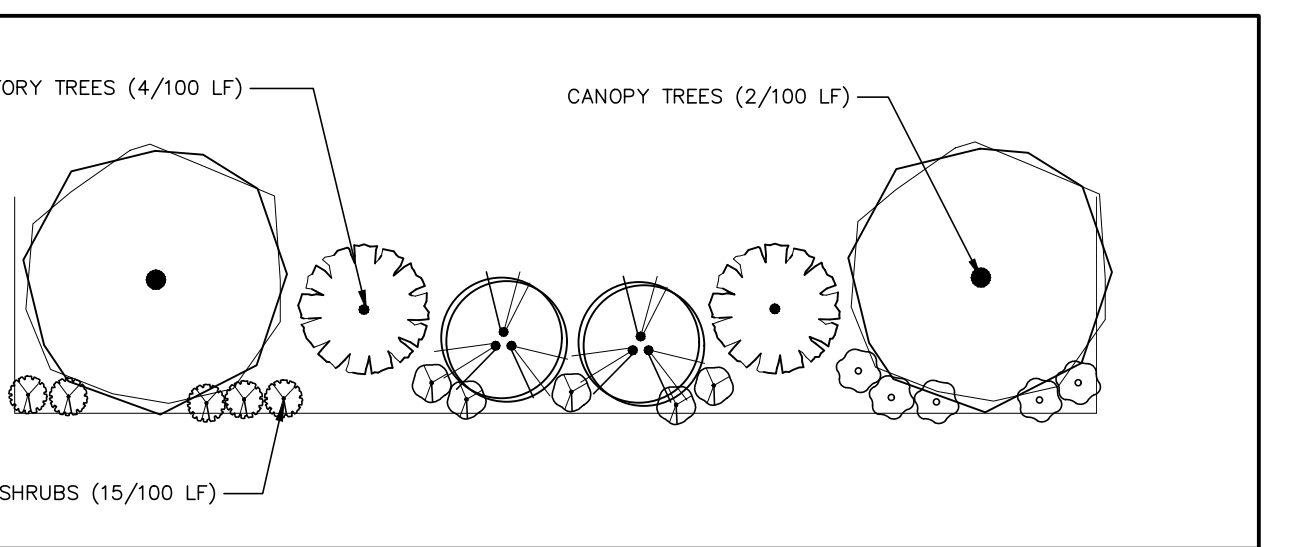
LANDSCAPE CALCULATIONS

STREET TREES	
STREET NAME A	5,484 LF
TREES REQUIRED:	55 (1/100 LF)
PROVIDED:	55
STREET NAME B	6,298 LF
TREES REQUIRED:	63 (1/100 LF)
PROVIDED:	63
STREET NAME C	1,371 LF
TREES REQUIRED:	14 (1/100 LF)
PROVIDED:	14
STREET NAME D	1,000 LF
TREES REQUIRED:	10 (1/100 LF)
PROVIDED:	10
STREET NAME E	3,498 LF
TREES REQUIRED:	35 (1/100 LF)
PROVIDED:	35
STREET NAME F	695 LF
TREES REQUIRED:	7 (1/100 LF)
PROVIDED:	7
STREET NAME G	1,737 LF
TREES REQUIRED:	17 (1/100 LF)
PROVIDED:	17
STREET NAME H	3,667 LF
TREES REQUIRED:	37 (1/100 LF)
PROVIDED:	37
STREET NAME I	343 LF
TREES REQUIRED:	3 (1/100 LF)
PROVIDED:	4
STREET NAME J	462 LF
TREES REQUIRED:	5 (1/100 LF)
PROVIDED:	5
STREET NAME K	1,202 LF
TREES REQUIRED:	12 (1/100 LF)
PROVIDED:	12
STREET NAME L	1,054 LF
TREES REQUIRED:	11 (1/100 LF)
PROVIDED:	11

VEHICLE USE AREAS:	
PARKING AREAS:	56 TOTAL SPACES
CANOPY TREES:	REQUIRED: = 9 [1 CANOPY TREE FOR EVERY 12 OFF STREET PARKING SPACES PROVIDED]
SHRUBS:	PROVIDED: = 9 [SINGLE CONTINUOUS ROW OF EVERGREEN SHRUBS]

PLANT SCHEDULE OVERALL LANDSCAPE PLAN

CANOPY TREES	CODE	QTY	COMMON NAME	BOTANICAL NAME	CAL.
	ARO	19	October Glory Maple	Acer rubrum 'October Glory'™	2.5'
	DAW	20	White Oak	Quercus alba	2.5'
	QCS	54	Scarlet Oak	Quercus coccinea	2.5'
	OLO	17	Overcup Oak	Quercus lyrata	2.5'
	QNN	69	Nuttall Oak	Quercus nuttallii	2.5'
	QPW	9	Willow Oak	Quercus phellos	2.5'
	UAP	32	American Elm	Ulmus americana 'Princeton'	2.5'
	UPC	52	Chinese Elm	Ulmus parvifolia	2.5'
	ZSG	7	Sawleaf Zelkova	Zelkova serrata 'Green Vase'	2.5'
EVERGREEN SHRUBS	CODE	QTY	COMMON NAME	BOTANICAL NAME	HEIGHT
	AGEG	123	Glossy Abelia	Abelia x grandiflora 'Edward Goucher'	18"
	ICCC	121	Carissa Holly	Ilex cornuta 'Carissa'	18"
	ICCD	117	Dwarf Japanese Holly	Ilex crenata 'Compacta'	18"



20' TYPE 'B' BUFFER
NOT TO SCALE

BUFFER PLANT SPECIES

- LARGE DECIDUOUS TREES**
- QUERCUS RUBRA - RED OAK
 - QUERCUS BICOLOR - SWAMP WHITE OAK
 - BETULA NIGRA - RIVER BIRCH
 - LIRIODENDRON TULIPIFERA - TULIP POPLAR
 - NYSSA SILVATICA - BLACK TUPLO
 - ACER RUBRUM - RED MAPLE
 - TAXODIUM DISTICHUM
- EVERGREENS**
- ILEX 'NELLIE STEVENS' - NELLIE STEVENS HOLLY
 - CRYPTOMERIA JAPONICA - JAPANESE CEDAR
 - MAGNOLIA GRANDIFLORA - SOUTHERN MAGNOLIA
 - JUNIPERUS VIRGINIANA - EASTERN REDCEDAR
 - ILEX OPACA - AMERICAN HOLLY
 - PINUS STROBUS - EASTERN WHITE PINE
 - PINUS TAEDA - LOBLOLLY PINE
- SMALL DECIDUOUS TREES**
- CERCIS CANADENSIS - RED BUD
 - CORNUS KOUSA - DOGWOOD
 - CARPINUS CAROLINA - EASTERN HORNBEEAM
 - AMELANCHIER ALBOREA - SERVICEBERRY
 - CORNUS FLORIDA - EASTERN FLOWERING DOGWOOD
 - CHIONANTHUS VIRGINICUS - FRINGETREE
 - Ostrya virginiana - AMERICAN HOP HORNBEAM
- SHRUBS**
- TEXT SPECIES:**
- OSMANTHUS FRAGRANS - TEA OLIVE
 - CAMELLIA JAPONICA - CAMELLIA
 - MYRTICA CERIFERA - SOUTHERN WAX MYRTLE
 - CHAMAECYPARIS PISIFERA - THREADLEAF FALSESPYRUS
 - LINDERA BENZONIN - SPECIUM
 - HYDRANGEA QUERCIFOLIA - OAKLEAF HYDRANGEA

NOTE: ADDITIONAL SPECIES MAY BE ALLOWED AT THE APPROVAL OF THE LANDSCAPE ARCHITECT



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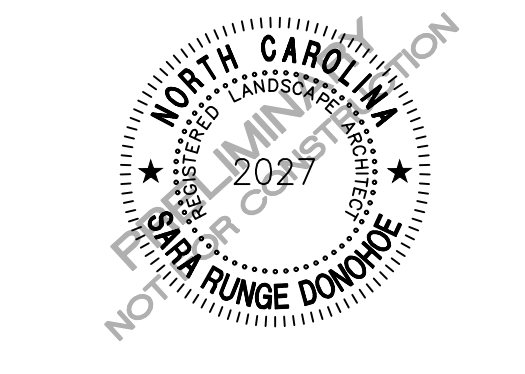
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DORY MEADOWS
 CONCEPT PLAN
 1509 CHAMBLEE ROAD
 ZEBULON, NORTH CAROLINA



REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO. DRH-22004
FILENAME DRH22004-L51
CHECKED BY SRD
DRAWN BY CMXY
SCALE N/A
DATE 11.01.2022

SHEET

LANDSCAPE NOTES & DETAILS
L5.01

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DORY MEADOWS

PLANNED DEVELOPMENT NARRATIVE DOCUMENT

Town of Zebulon
November 1, 2022



TABLE OF CONTENTS

- 1. VISION + INTENT**
 - Purpose of Planned Developments
 - Legislative Considerations / Justification Statements
- 2. EXISTING CONDITIONS**
 - Summary
 - Vicinity Map
 - Current Zoning Map
- 3. PLANNED DEVELOPMENT MASTER PLAN**
 - Development Details
 - Permitted Uses
 - Single-Family Dwellings (Dimensional Standards Design)
 - Townhouses (Dimensional Standards Design)
- 4. PLAN CONSISTENCY / LAND USE COMPATIBILITY**
- 5. CONDITIONS / REQUESTED DEVIATIONS**
- 6. TRANSPORTATION ANALYSIS**
- 7. RECREATIONAL OPEN SPACE + AMENITIES**
- 8. PUBLIC INFRASTRUCTURE**
 - Streets + Sidewalk
 - Stormwater
 - Water + Sewer

Dory Meadows Planned Development

Planned Development - Narrative Document
Prepared for The Town of Zebulon

Submittal Dates

First Submittal:	11/1/22
Second Submittal:	N/A
Third Submittal:	N/A

Developer

D.R. Horton
7208 Falls of Neuse Rd, Ste 201
Raleigh, NC 27615

McAdams Company, Design Lead

621 Hillsborough Street, Ste 500
Durham NC 27113



MCADAMS



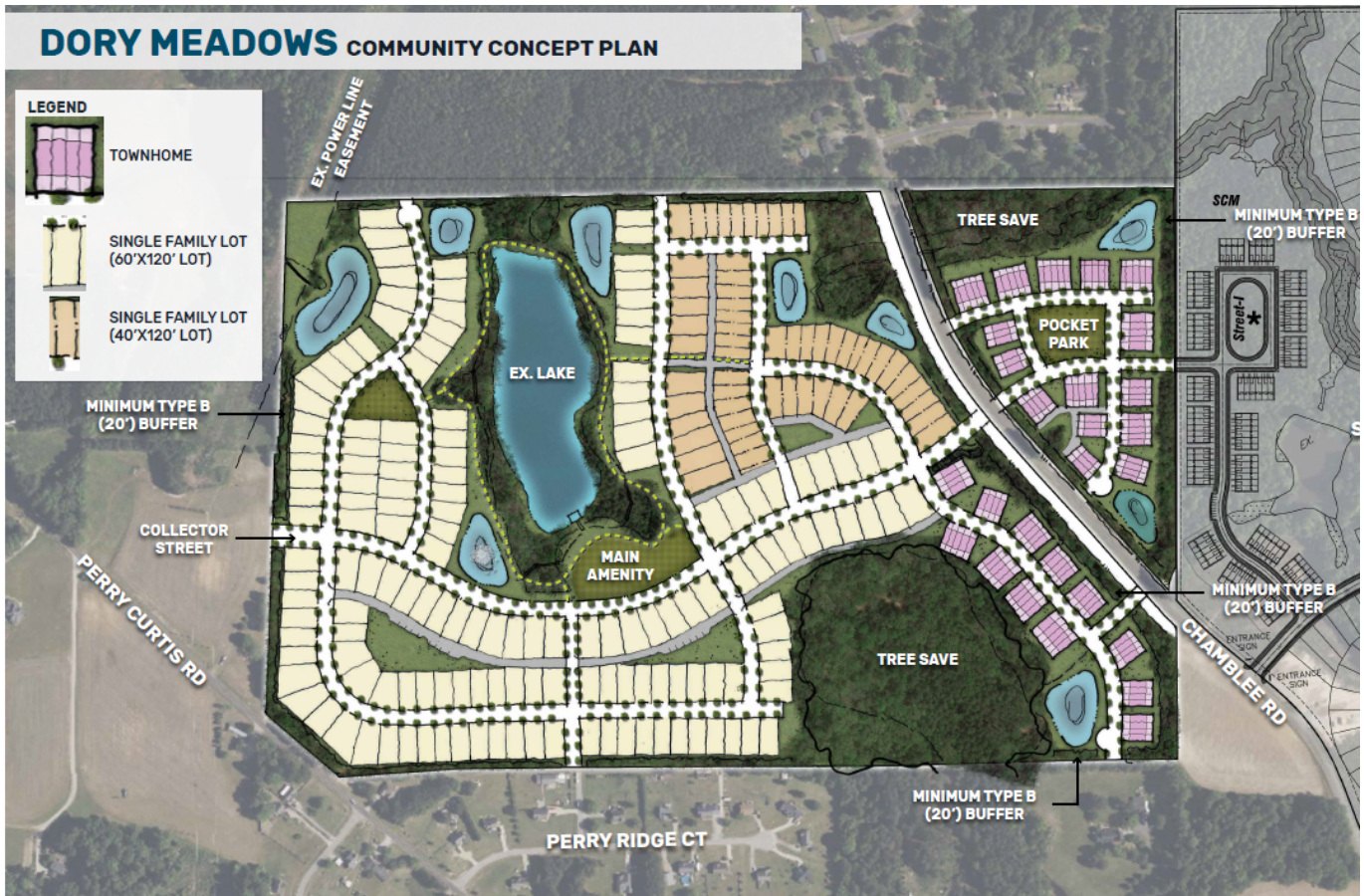
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VISION + INTENT

VISION + INTENT

As referenced in Section 3.5.5 of the Town of Zebulon Unified Development Ordinance, Planned Developments are intended to encourage innovative land planning and site design concepts that support a high quality of life and achieve a high quality of development, environmental sensitivity, energy efficiency, and other Town goals and objectives. As shown in the following pages, the Dory Meadows Planned Development is structured to embody and support excellence in site design, circulation, environmental protection, and compatibility with neighboring properties. The Planned Development process encourages creativity in the design of development, but in return for this flexibility the expectation is for communities to:

- Promote a vibrant public realm by placing increased emphasis on active ground floor uses, pedestrian-oriented building facade design, intensive use of sidewalks, and establishment of public gathering areas.
- Provide for efficient use of land resulting in smaller networks of utilities and streets and thereby lowering development and housing costs.
- Promote quality design and environmentally sensitive development that respects surrounding established land use character and respects and takes advantage of a site's natural and man-made features, such as trees, estuaries, shorelines, special flood hazard area, and historic features.



THE DORY MEADOWS PLANNED DEVELOPMENT ADHERES TO THE FOLLOWING LEGISLATIVE CONSIDERATIONS:

How the Planned Development advances the public health, safety, or welfare.

The proposed Planned Development will provide a much-needed supply of housing in a regional market that is chronically undersupplied – resulting in significant housing affordability issues due to skyrocketing home prices. Furthermore, the proposed location of this development will result in a safe and convenient neighborhood within a 5-minute drive to the Zebulon Community Park, shopping in downtown Zebulon, and a local fire station and EMS station. The development will be within a 10-minute drive of the local police station and all levels of grade schools. Finally, with over 1/3rd of the gross acreage retained as open space, the proposed Planned Development will help protect environmental health and promote a more active lifestyle.

How the proposed Planned Development is appropriate for its proposed location, and is consistent with the purposes, goals, objectives, and policies of the Town’s adopted policy guidance.

Though this development would constitute a satellite annexation, it abuts a previously approved satellite annexation known as Sidney Creek. Thus, municipal services are already being extended to this area. Furthermore, as indicated in Response #1, this site is less than a 10 minute drive to the areas schools, downtown shopping, and public safety facilities.

The adopted Future Land Use Map designates this area as Suburban Residential (SR) and identifies one of the Primary Land Use Types for Suburban Residential as, “Planned developments that integrate other housing types (e.g., attached residential such as patio homes or townhomes) [in addition to Detached residential dwellings], with increased open space to preserve an overall suburban character.” Thus, the proposed Planned Development with a mix of SFD detached dwellings, attached dwellings, and over 1/3rd of gross acreage as open space precisely fits the intended use and place type within the SR FLU designation.

Furthermore, this Planned Development advances the following goals and policies of the Town’s adopted Comprehensive Plan:

[Land Use and Development – Goal 1] – “A land use allocation and pattern that advances Zebulon’s objectives of achieve greater housing variety ..with convenient resident access to schools, recreation, shopping and Services.”

- **Supporting Statement(s):**
 - The site is located within a 5-minute drive to Zebulon Community Park, Downtown Zebulon Shopping, Fire Station, and EMS station and less than 10 minutes from Zebulon elementary, middle, and high school.
 - The proposed development includes a mix of rear-loaded homes SFD homes, front-loaded SFD homes, and Townhomes, providing a variety of housing options to suit different needs.

THE DORY MEADOWS PLANNED DEVELOPMENT ADHERES TO THE FOLLOWING LEGISLATIVE CONSIDERATIONS:

The Planned Development advances the following goals and policies of the Town's adopted Comprehensive Plan:

[Land Use and Development – Goal 3] – “Ongoing and effective collaboration between land use and transportation planning to ensure a well-connected community with adequate means and capacity to accommodate multiple forms of circulation between local destinations.”

- **Supporting Statement(s):**

- The proposed Planned Development incorporates a new E-W collector road free of driveways, which will ultimately form a new connection between Chamblee Road and Perry Curtis road to the west. This new route will form a travel alternative to the current Perry Curtis Road connection to Chamblee road – one with significantly improved access management and which aligns through the Planned Development directly to the Sidney Creek subdivision to the east. This new collector road, through its future westward extension, could be designed as the main E-W throughway to Chamblee road in lieu of the current Perry Curtis Road connection, or it could “T” into Perry Curtis Road. This decision could be made in the future based upon traffic needs at that time and with coordination with NCDOT.

[Land Use and Development – Policy C] – “Emphasize compatible intensities and character when evaluating applications involving more intensive and/or non-residential development near existing homes and neighborhoods.

- **Supporting Statement(s):**

- The proposed Planned Development locates its denser Townhome units closer to Chamblee Road, where existing infrastructure is most capable of serving it. Furthermore, the location of townhomes on the east side of Chamblee Road connects to proposed Townhomes to be established as a future phase of the Sidney Creek development. Detached single family home lots are proposed along most of the project perimeter, where the proposed PD abuts existing subdivisions such as the Perry Creek and Fieldcrest Meadow subdivisions to the south. A riparian buffer and additional undisturbed open space is left along the site's northern boundary where it abuts the Carroll Heights subdivision.

[Land Use and Development – Policy D] – “Promote land use outcomes that further community objectives for preventing traffic congestion, ensuring more pedestrian- and cyclist-friendly design, and support expanded and viable public transit options.”

- **Supporting Statement(s):**

- As explained under the response for Goal 3 for Land Use and Development, the proposed E-W collector road will be unloaded with driveways and will enhance both vehicular, bicycle, and pedestrian connectivity. Additional trail networks within the site's open space will further support recreational bicycle and pedestrian use.

THE DORY MEADOWS PLANNED DEVELOPMENT ADHERES TO THE FOLLOWING LEGISLATIVE CONSIDERATIONS:

The Planned Development advances the following goals and policies of the Town's adopted Comprehensive Plan:

[Land Use and Development – Policy E] – “Ensure development design respects the area’s environmental assets and resource base, including waterways and their riparian buffers, unique landscapes, and mature tree stands, especially where there is potential for greenway and/or blueway acquisition.”

- **Supporting Statement(s):**

- As proposed the Dory Meadows Planned Development retains approximately 1/3rd of the site as open space (both passive and active). The site design integrates and provides convenient access to several environmental features, including riparian buffers, over 10 acres of wooded wetlands, and a 5+ acre lake. The main amenity for the development is located along this existing lake, letting the natural environment serve as an extension of and backdrop to this active open space. The site’s larger residential lots back up to this lake, with a pedestrian trail network providing access along its perimeter.

[Land Use and Development – Policy G] – “Ensure that all residential developments have multiple access points for public safety reasons and circulation options.”

- **Supporting Statement(s):**

- The proposed Planned Development has multiple access points along Chamblee Road, connects to a future phase of the Sidney Creek approved development to the east, and connects to Perry Curtis Road via an the existing stub of Ridge Valley Way to the south. Roadway stubs will also be provided in 2 locations along the northern property boundary – to be extended at the time of future development.

[General Policy – G1] – “Land uses should not detract from the enjoyment or value of neighboring properties.”

- **Supporting Statement(s):**

- All proposed uses are residential in nature, abutting existing residential uses or vacant land. At a minimum, a Type B buffer (20’ width) is provided along the project perimeter (either as preserved vegetation or new plantings).

[General Policy – G3] – “Adequate transportation access and circulation should be provided for uses that generate large numbers of trips. Pedestrian and bicycle access should be addressed where appropriate.”

- **Supporting Material:**

- The proposed Planned Development incorporates a new E-W collector road free of driveways, which will ultimately form a new connection between Chamblee Road and Perry Curtis road to the west. This new route will form a travel alternative to the current Perry Curtis Road connection to Chamblee road – one with significantly improved access management and which aligns through the Planned Development directly to the Sidney Creek subdivision to the east.
- Sidewalks shall be provided along all proposed streets and off-street pedestrian trails shall be provided to improve access to the site’s natural features and active open spaces.

THE DORY MEADOWS PLANNED DEVELOPMENT ADHERES TO THE FOLLOWING LEGISLATIVE CONSIDERATIONS:

The Planned Development advances the following goals and policies of the Town's adopted Comprehensive Plan:

[General Policy – G6] – “Environmentally sensitive areas should be protected, including wildlife habitat areas.”

- **Supporting Statement(s):**

- The proposed site design avoids any new vehicular crossings of riparian buffers, as well as works around a significant (10 acre) wetland area in the southeastern portion of the site. Pedestrian access is provided to these areas to allow for community enjoyment and exposure to nature, but otherwise they are left undisturbed.

[Residential Policy – R1] – “Residential areas should not be located next to heavy industrial areas.”

- **Supporting Statement(s):**

- All adjacent zoning and existing uses are residential or agricultural in nature. No industrial areas are located adjacent to the proposed planned development.

[Residential Policy – R3] – “Schools, parks and community facilities should be located close to or within residential neighborhoods.

- **Supporting Statement(s):**

- The site has over 4 acres of private/active open space proposed within the residential neighborhood.
- The site is within a 5-minute drive to Zebulon Community Park, Downtown Zebulon Shopping, a Fire Station, and an EMS station.
- The site is less than a 10-minute drive to elementary, middle, and high schools.

[Residential Policy – R4] – “Houses should have direct access to local residential streets but not to collector streets or thoroughfares.

- **Supporting Statement(s):**

- No driveways are located along the site's proposed E-W collector road. All dwelling units have direct access to a local residential street or an alley.

[Residential Policy – R7] – “New residential developments should include adequate area for parks and recreation facilities, schools and places of worship.

- **Supporting Statement(s):**

- The site has over 40 acres open spaces, including over 3 acres of private, active open space.

[Parks and Open space Policy – P5] – “Natural features should be used as buffers or preserved open space between or around developed areas.”

- **Supporting Statement(s):**

- The proposed Planned Development utilizes both riparian buffers and wooded woodlands to provide natural buffers between developed areas.

THE DORY MEADOWS PLANNED DEVELOPMENT ADHERES TO THE FOLLOWING LEGISLATIVE CONSIDERATIONS:

How the proposed Planned Development is reasonable and in the public interest.

As indicated in the previous response statements, the proposed uses and density is aligned with the adopted Future Land Use Map and place types intended for the suburban residential designation. The site is adjacent to an large existing satellite annexation, meaning urban services have already been extended to this area and the extension of those services to this development will not incur any disproportionate ongoing costs to service agencies (police, fire, public works, etc.). Finally, the site protects a significant amount of natural areas, while providing an east-west collector road free of driveways to facilitate connectivity and ease the amount of traffic utilizing a portion of Perry Curtis road which does not have nearly as good access management as the proposed development.

How the proposed Planned Unit Development provides for innovative land planning and site design concepts that support a high quality of life and achieve a high quality of development, environmental sensitivity, energy efficiency, and other Town goals and objectives.

The propose Planned Development utilizes the natural features of the site as an asset to be built around, rather than as an obstacle to overcome. The site design integrates and provides convenient access to several environmental features, including riparian buffers, over 10 acres of wooded wetlands, and a 5+ acre lake. The main amenity for the development is located along this existing lake, letting the natural environment serve as an extension of and backdrop to this active open space. The site's larger residential lots back up to this lake, with a pedestrian trail network providing access along its perimeter. Existing wetlands and riparian buffers are preserved and used along the northern and southern property boundaries as natural perimeter buffers.

The proposed E-W collector street provides improved access and connectivity at a scale that does not split the community in terms of pedestrian cross-access. Furthermore, the absence of driveways along this collector street allows for a much more aesthetically pleasing and pedestrian friendly streetscape for the development's primary connecting street.

How the how the proposed planned unit development provides improved means of access, open space, and design amenities.

The proposed layout provides 4 points of access along Chamblee Road, 3 local street stubs to be extended when future development is proposed, a connection which aligns with the proposed Sidney Creek street layout to the east and will provide direct access to Chamblee Road for this adjacent development, and a new collector street that when extended through 1 additional property to the west will provide an improved alternative to a portion of Perry Curtis Road for east-west movement.

Active open spaces are distributed throughout the development for convenient access and are located along the site's major internal roadway. The main amenity utilizes the large existing lake as a significant site feature. Architectural design standards are proffered for the development, as outlined in the Planned Development document.

THE DORY MEADOWS PLANNED DEVELOPMENT ADHERES TO THE FOLLOWING LEGISLATIVE CONSIDERATIONS:

How the proposed Planned Unit Development provides a well-integrated mix of residential and nonresidential land uses in the same development, including a mix of housing types, lot sizes, and densities.

Due to the future land use plan's 'Suburban Residential' designation for this area, non-residential land uses are not included in the overall layout. However, the site does include a mix of housing types, lot sizes, lot orientations, and densities in the form of single family detached dwellings and townhomes. Details on dimensional standards for the sites different residential products are contained in a later section of this document.

How the proposed Planned Unit Development creates a system of incentives for redevelopment and infill in order to revitalize established areas.

The proposed development is primarily surrounded by vacant land, creating an incentive for 'development' rather than 'redevelopment', as roadway and utility extensions included as part of this project make adjacent development more viable. Redevelopment opportunities in this area would likely be more limited to potential future pedestrian improvements in an existing adjacent neighborhood.

How the proposed Planned Unit Development promotes a vibrant public realm by placing increased emphasis on active ground floor uses, pedestrian-oriented building façade design, intensive use of sidewalks, and establishment of public gathering areas.

The layout for the proposed development is intentional in terms of its creation of public gathering areas in the form of active and passive open spaces. The primary amenity is centrally located within the development along the site's primary internal road and backing up to a large lake. This amenity will serve as the heart of this neighborhood, where both formal and informal events are held.

In addition to the site's active open spaces, the proposed Planned Development will have an extensive pedestrian trail system that facilitates the use of its public gathering areas. All local new roads shall have sidewalks on both sides.

How the proposed Planned Unit Development provides for efficient use of land resulting in smaller networks of utilities and streets and thereby lowering development and housing costs.

The proposed layout preserves approximately 1/3rd of its acreage as passive or active open space. The result of this type of layout is a more condensed development pattern with smaller lots served by less linear feet of infrastructure, surrounded by a significant amount of common open space in lieu of larger individual yards. The interconnected road network is only limited by the numerous environmental features which this site must accommodate.

THE DORY MEADOWS PLANNED DEVELOPMENT ADHERES TO THE FOLLOWING LEGISLATIVE CONSIDERATIONS:

How the the proposed Planned Unit Development provides quality design and environmentally sensitive development that respects surrounding established land use character and respects and takes advantage of a site's natural and man-made features, such as trees, estuaries, shorelines, special flood hazard area, and historic features.

As mentioned in previous responses, the site design preserves and provides convenient access to several environmental features, including riparian buffers, over 10 acres of wooded wetlands, and a 5+ acre lake. The main amenity for the development is located along this existing lake, letting the natural environment serve as an extension of and backdrop to this active open space. The site's larger residential lots back up to this lake, with a pedestrian trail network providing access along its perimeter.

Existing wetlands and riparian buffers are preserved and used along the northern and southern property boundaries in locations as natural perimeter buffers. Where these existing features are not present along the project perimeter, a minimum Type B Buffer is proposed.

To better align with nearby development, the site's Townhomes are clustered on the eastern side of the development, adjacent to approved Townhomes to be built as part of the Sidney Creek development.

Other factors as the Board of Commissioners may determine to be relevant.

The inclusion of some front-loaded townhomes within the development helps create a more diverse and economically resilient residential offering and supports housing affordability by avoiding costs associated with rear-loaded alleys within this segment.

Please refer to the associated Planned Development document for more information on proposed architectural conditions.



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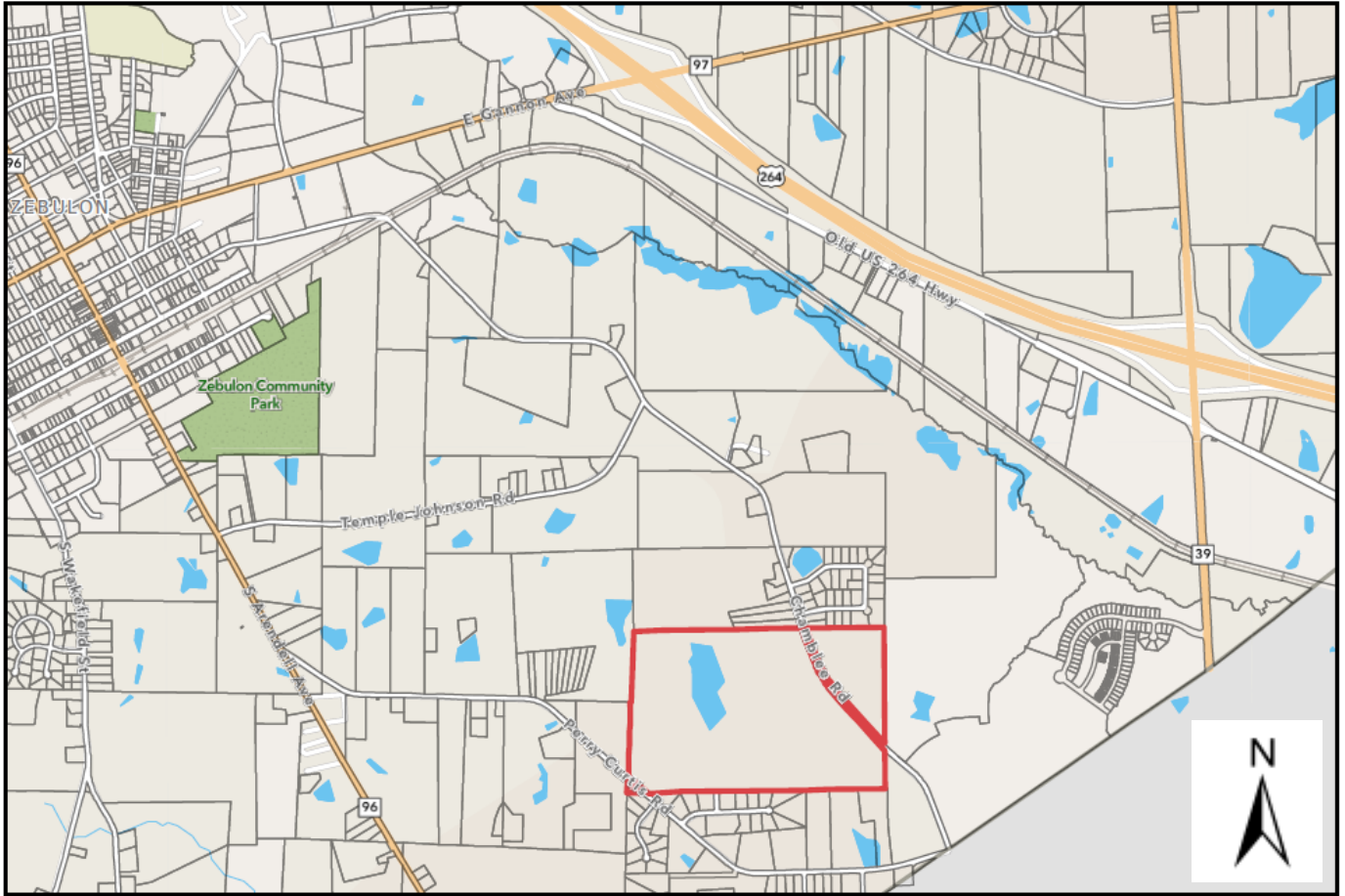
EXISTING CONDITIONS

EXISTING CONDITIONS SUMMARY

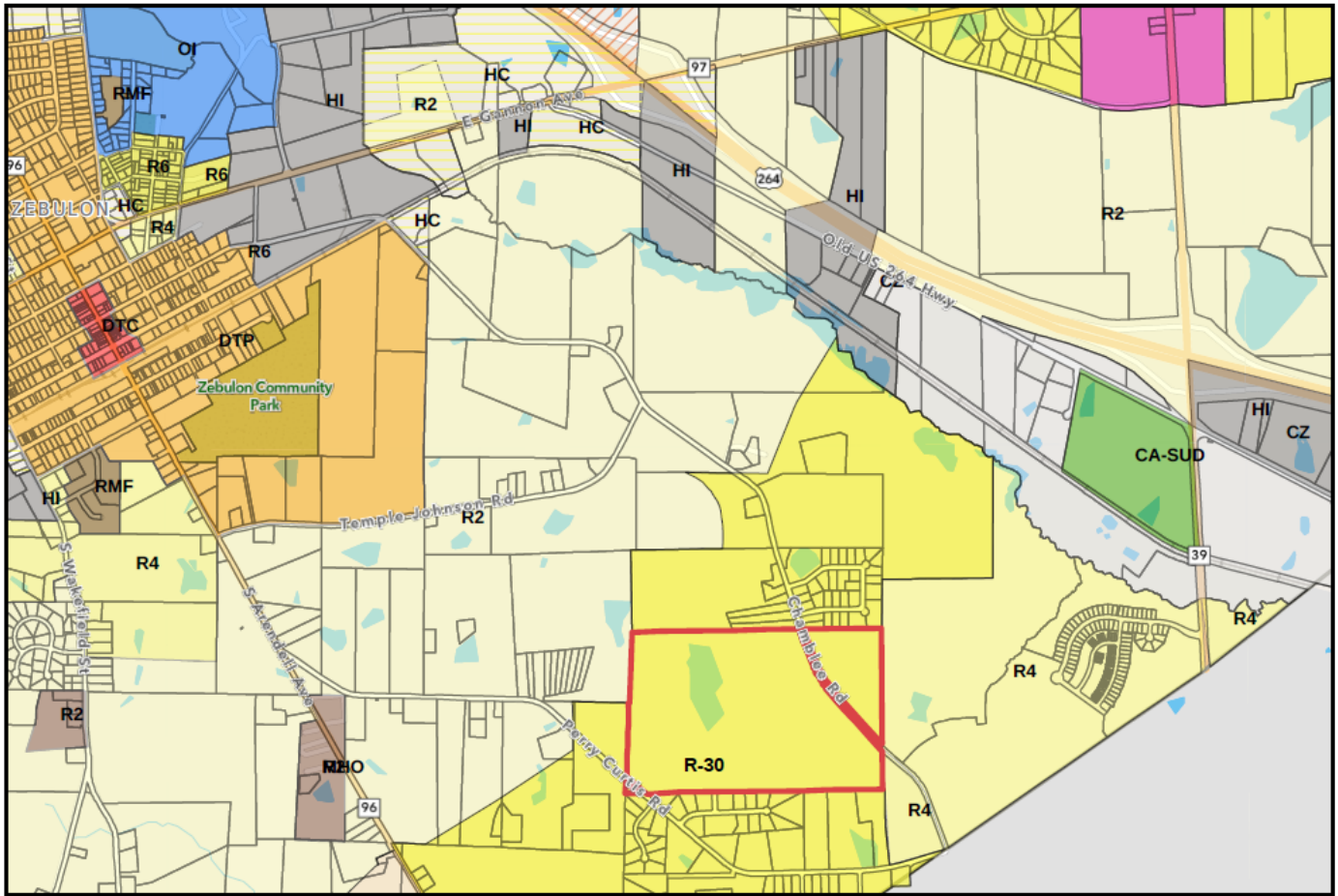
The Dory Meadows Planned Development is located on a single parcel (+/- 136-acres) near the intersection of Chamblee Rd and Perry Curtis Road, along the southeastern boundary of Zebulon's zoning jurisdiction. The site is currently in Wake County's zoning jurisdiction, but a petition for annexation accompanies this rezoning request. The parcel is divided by Chamblee Road, with the majority of the site located to the west of Chamblee Road. The site is located generally between Snipes Creek to the west and Little Creek (west side) to the east, with both riparian buffers and jurisdictional wetlands on site. The most prominent environmental features include a +/- 6 acre pond located on the western side of Chamblee Road and a 10+ acre wetland area located along the southern property line. This project is free of any floodplain. The site generally slopes eastwards towards Little Creek, with some internal variation within the boundary. Two jurisdictional streams will be preserved during development with no vehicular stream crossings proposed. Current land cover includes large stands of trees and cleared fields used for agricultural purposes.

VICINITY MAP

EXISTING
CONDITIONS



CURRENT ZONING MAP



EXISTING
CONDITIONS



3

PLANNED DEVELOPMENT MASTER PLAN

PLANNED DEVELOPMENT CONCEPT PLAN

DEVELOPMENT DETAILS

Dory Meadows is planned as a mixed-residential development consisting of a 362 units, designed to the Planned Development standards of the Town of Zebulon Unified Development Ordinance. Due to the site's proposed density of less than 3 DUA, the development shall use the R4 district as the base zoning of it's planned development, except as modified by this document. Dory Meadows will provide a variety of housing choices for future residents as well as well-designed and multi-functional recreational amenities. The development will establish bicycle and pedestrian connections between proposed site amenities, while preserving a significant amount of natural areas comprised of wetlands, riparian buffers, and a sizable existing pond. Permitted uses shall be limited to single family detached dwellings, attached single family dwellings (townhomes), and customary residential accessory uses.

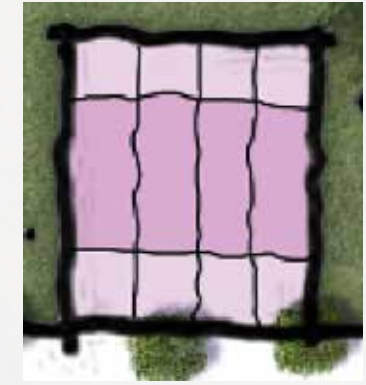
PLANNED DEVELOPMENT

DEVELOPMENT MIX

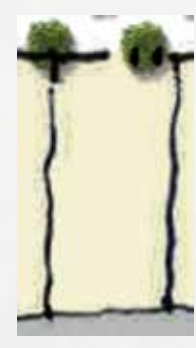
	Maximum # of Units	Estimated Percentage of Dev.
• Single Family Dwellings	231	63.6%
• Townhomes	131	36.4%

DORY MEADOWS COMMUNITY CONCEPT PLAN

LEGEND



TOWNHOME



SINGLE FAMILY LOT
(60'X120' LOT)



SINGLE FAMILY LOT
(40'X120' LOT)

MINIMUM TYPE B
(20') BUFFER

COLLECTOR
STREET

PERRY CURTIS RD

EX. POWER LINE
EASEMENT



EX. LAKE

MAIN
AMENITY

TREE SAVE

PERRY RIDGE CT

MINIMUM TYPE B
(20') BUFFER

TREE SAVE

POCKET
PARK

SCM
MINIMUM TYPE B
(20') BUFFER

MINIMUM TYPE B
(20') BUFFER

CHAMBLEE RD

ENTRANCE SIGN

ENTRANCE SIGN

SIDNEY CREEK

SCM

Street-I

Street-J

Street-K

Street-G

Street-E

FUTURE
SIDNEY
PHASE

FRONT LOADED SINGLE-FAMILY DWELLINGS

MODIFICATIONS TO UDO STANDARDS

The Town of Zebulon UDO requires that any lot less than 70' in width be accessed via rear lane access (or side on a corner lot) and that any SFD detached lot within the R4 district be a minimum of 6000 sq. feet or more in size (depending on whether the development complies with residential design guidelines or follows Conservation Subdivision. In order to accommodate a more compact design that supports preservation of environmental sensitive features, this project would permit front-loading of lots 40' and larger and SFD detached lots with a minimum lot size of 4500 sq. ft. The majority of front-loaded lots shall be 60' or larger, as shown in the associated Concept Plan. The applicant has offered tailored architectural standards for these units as a condition of the zoning approval.

To encourage interaction between the public and private realm, front-loaded single-family dwellings in Dory Meadows will permit a minimum front setback of 20' feet, rather than the UDO requirement of 30 feet. Side and rear setbacks are also reduced compared to typical R4 requirements, as indicated below.

FRONT LOADED SFD DIMENSIONAL STANDARDS

› Min. Lot Area	4500 sf
› Min. Lot Width	40'
› Front Setback (min)	20'
› Side Setback (min)	3' for 40' wide lot / 5' for 60' wide lot
› Corner Setback (min)	Min. Side Setback + 10 ft
› Rear Setback (min)	20'
› Maximum building height	35' / 3 stories

REAR LOADED SINGLE-FAMILY DWELLINGS

MODIFICATIONS TO UDO STANDARDS

The Town of Zebulon UDO requires that any lot within the R4 district be a minimum of 6000 sq. feet or more in size (depending on whether the development complies with residential design guidelines or follows Conservation Subdivision. In order to accommodate a more compact design that supports preservation of environmental sensitive features, this project would permit rear-loading of lots 40' wide and larger and SFD detached lots with a minimum lot size of 4500 sq. ft. The applicant has offered tailored architectural standards for these units as a condition of the zoning approval.

To encourage interaction between the public and private realm, rear-loaded single-family dwellings in Dory Meadows will permit a minimum front setback of 10' feet, rather than the UDO requirement of 30 feet. Side and rear setbacks are also reduced compared to typical R4 requirements, as indicated below.

REAR LOADED SFD DIMENSIONAL STANDARDS

› Min. Lot Area	4500 sf
› Min. Lot Width	40'
› Front Setback (min)	10'
› Side Setback (min)	3' for 40' wide lot / 5' for 60' wide lot
› Corner Setback (min)	Min. Side Setback + 10 ft
› Rear Setback (min)	20'
› Max Height	35' / 3 stories

TOWNHOUSES

MODIFICATIONS TO UDO STANDARDS

The Town of Zebulon UDO provides dimensional standards for attached single family development (i.e. Townhomes) based on the entire building unit. Rather than apply dimensional standards based on the entire Townhome building, Dory Meadows shall adhere to the following dimensional standards for each individual townhome lot (and be exempt from the dimensional standards contained in Section 3.3.4 of the UDO). Townhomes within Dory Meadows will be a mix of front-loaded and rear-loaded options. The applicant has offered tailored architectural standards for these units as a condition of the zoning approval, and hereby limits townhome buildings to no more than 6 consecutive townhome lots.

TOWNHOUSE DWELLING DIMENSIONAL STANDARDS

- Min. Lot Area 2000 SF
- Min. Street Setback (front or corner) 5' (20' for face of garage on front-loaded units)
- Min. Side Setback N/A
- Min. Rear Setback 20'
- Min. Building Separation 10'
- Max Building Height 42' / 3 stories
- Min. Lot Width 20' (24' for end units)

ARCHITECTURAL DESIGN STANDARDS (Voluntary Commitments)

Dory Meadows offers the following architectural design standards as they relate to detached and attached single family homes:

1. All single-family detached homes with crawl spaces shall have the front of the crawlspace wrapped in brick or stone.
2. All single - family homes with stem wall or slab foundations will contain a minimum of 2 stair risers (12 inches) up to the front porch and the front of the foundation will be wrapped in either brick or stone.
3. All single - family homes and townhomes will have a one or more of the following materials on the front facade (not including foundation): stone, brick, lap siding, cementitious siding, shakes or board and batten. The exterior siding material on the side and rear facades will be fiber cement. When two materials are used, the materials shall be different but complementary colors. Vinyl may be used only for soffits, fascia and corner boards.
4. Vinyl siding shall not be permitted. However vinyl windows, decorative elements and trim are permitted.
5. Single Family main roof pitches (excluding porches) fronting the street for 2 - story homes will be at least 6: 12.
6. Single family main roof pitches (excluding porches) fronting the street for 1 - story and 1.5 - story homes will be at least 6:12 unless an alternate is approved by staff.
7. Townhome roof pitches will be at least 6:12.
8. Garages will not protrude more than 6 feet from the front porch or stoop, and all garage doors shall contain window inserts.
9. Eaves, front and rear, shall project a minimum of 6". Side eaves shall be a min of 4". Eaves will be allowed to encroach into required setbacks.
10. No two adjacent residential units (side-by-side) shall have identical front facade colors. Color schemes of townhome buildings will be different from one building to the next.

Example Building Elevations

The following example building elevations are representative of the type of design features intended for SFD detached and attached homes in Dory Meadows, in keeping with the architectural standards committed to as part of the zoning approval. For review of submitted building permits to follow, the list of architectural commitments should be used as the regulatory standard for approval.

Front-Loaded SFD Example Elevations



Front-Loaded SFD Example Elevations

PLANNED
DEVELOPMENT



Rear-Loaded SFD Example Elevations

PLANNED
DEVELOPMENT



Rear-Loaded SFD Example Elevations



Townhome Example Elevations

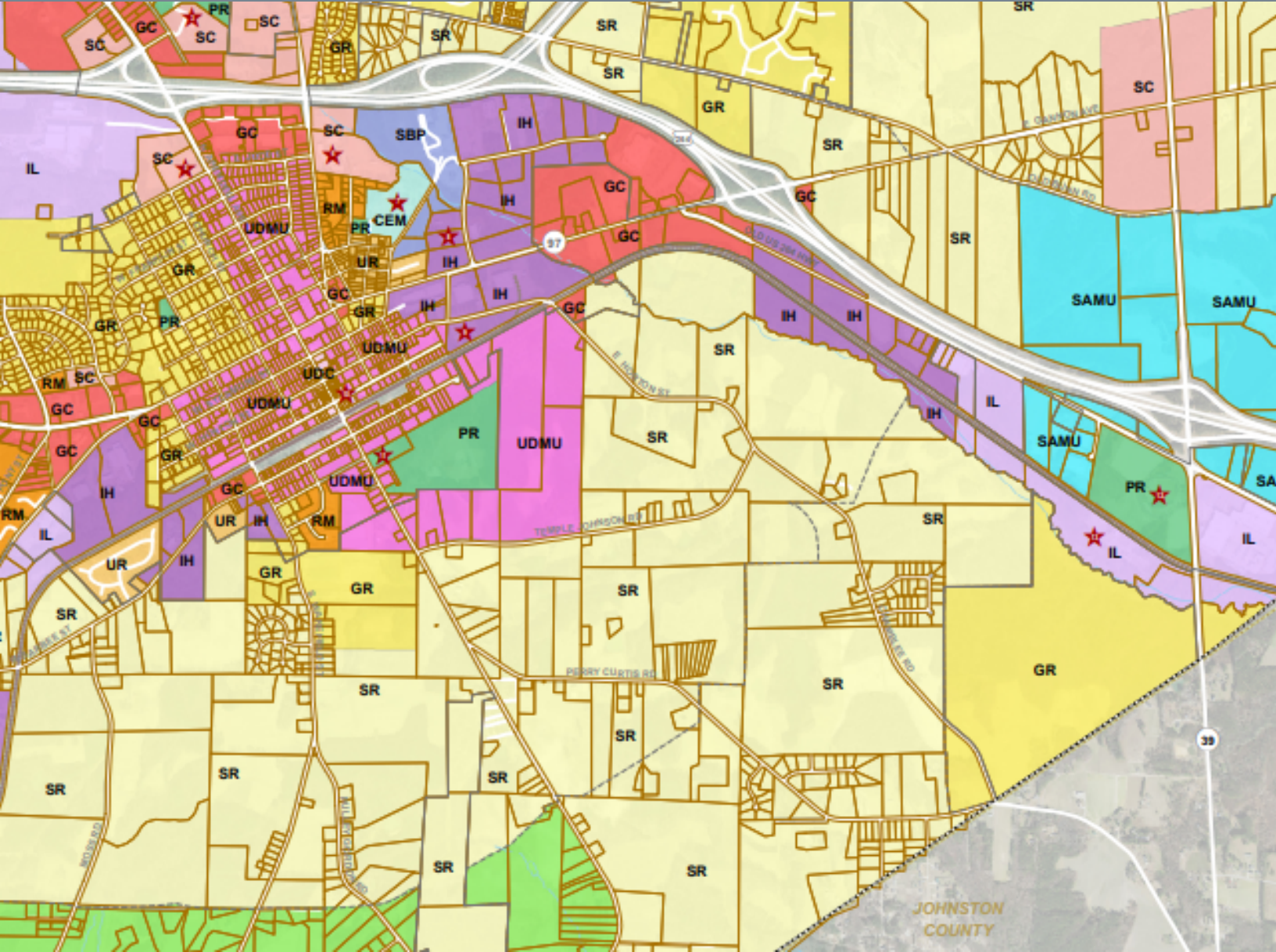


PLANNED
DEVELOPMENT

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4

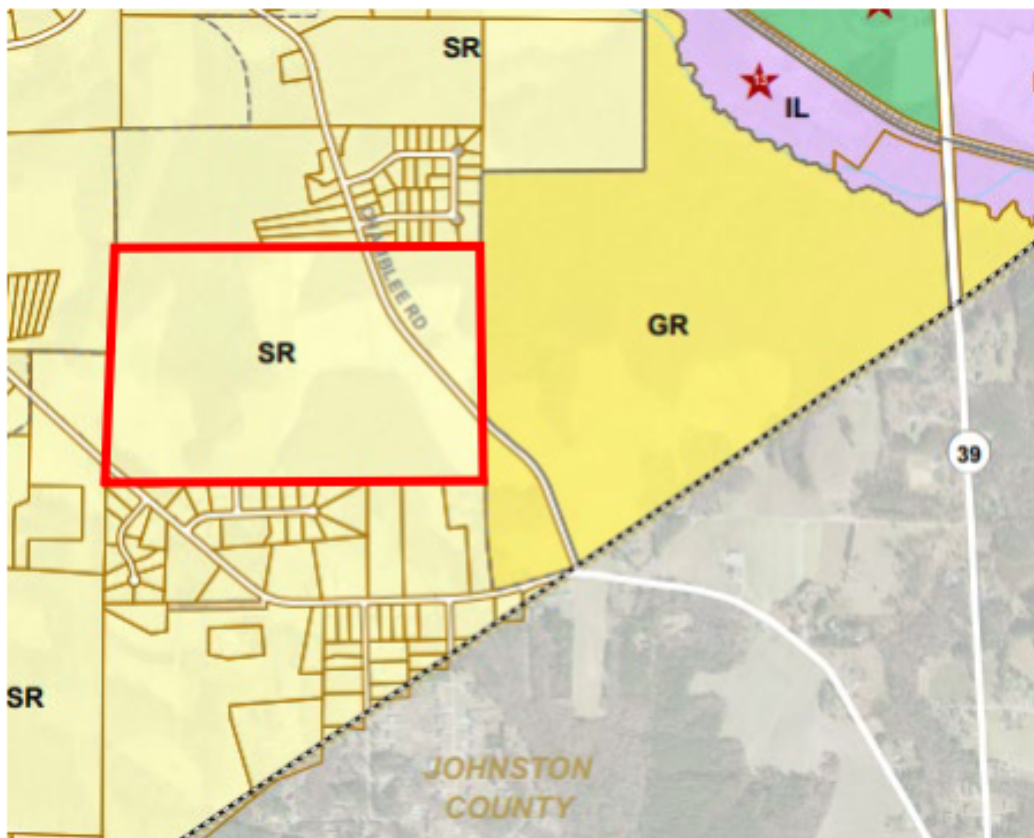
PLAN CONSISTENCY / LAND USE COMPATIBILITY

COMPREHENSIVE PLAN CONSISTENCY

As previously stated in the 'legislative considerations' section of this narrative document, this rezoning is consistent with the Future Land Use Map (the "FLUM") and many goals and recommendations of the Town's Comprehensive Plan.

The adopted Future Land Use Map designates this area as Suburban Residential (SR) and identifies one of the Primary Land Use Types for Suburban Residential as, "Planned developments that integrate other housing types (e.g., attached residential such as patio homes or townhomes) [in addition to Detached residential dwellings], with increased open space to preserve overall suburban character."

Thus, the proposed Planned Development with a mix of SFD detached dwellings, attached dwellings, and over one third of gross acreage as open space precisely fits the intended use and place type within the Suburban Residential (SR) Future Land Use designation. It is also worth noting that the proposed site abuts a 'General Residential' (GR) Future Land Use area to the east, which is meant to support even more intense residential uses than Suburban Residential.



- Suburban Residential (SR)
- General Residential (GR)

LAND USE COMPATIBILITY

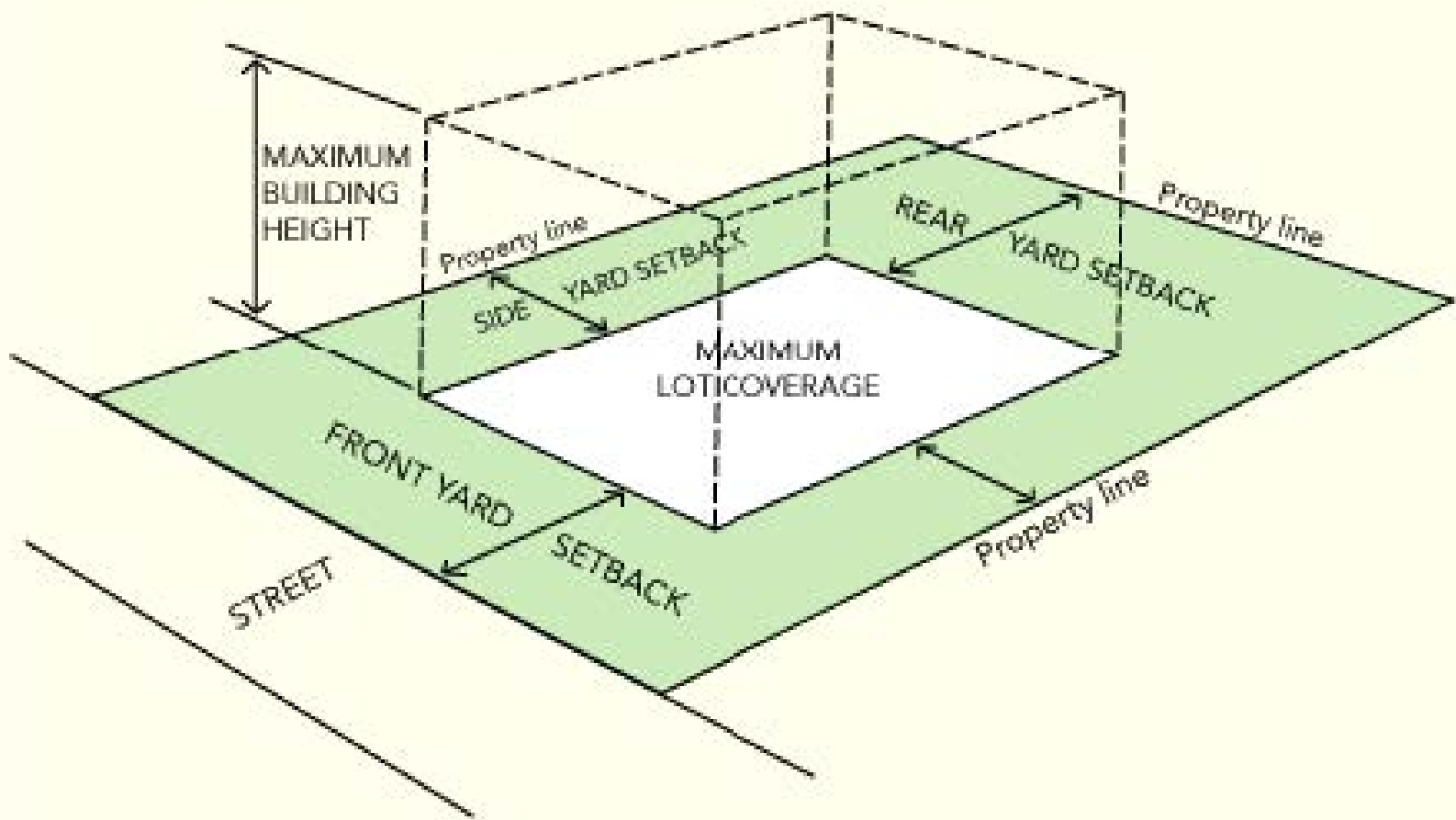
The proposed development is limited to detached single family detached lots and attached single family lots (aka townhouses). These proposed uses, and the development standards restricting those uses, are compatible with the adjacent communities, which are zoned and/or currently used for low to medium density residential uses.

The proposed development standards defined within this document and the associated concept plan will ensure quality of design across the entire development. The overall site layout is designed to create a cohesive environment by positioning the more dense residential uses along Chamblee Rd, adjacent to proposed Townhomes in the approved Sidney Creek subdivision. The site transitions to lower density single family homes along the edges of the community, and utilizes environmental features as natural buffers to adjoining property. The concept plan features a creative integration of residential uses, active open space, and preserved open space to create a cohesive environment. The design guidelines will ensure quality architectural features that are consistent across the community.

COMPLIANCE WITH ADOPTED TRANSPORTATION PLAN

The Town's adopted 2045 Comprehensive Transportation Plan (CTP) includes a proposed 4-lane divided new roadway which appears to traverse the northern portion of this property (west of Chamblee Road). This proposed roadway runs roughly parallel to Temple Johnson Road to the north and would provide traffic relief to a portion of Perry Curtis Road by forming an alternative connection to Chamblee Road.

In recognition of this planned CTP road, Dory Meadows incorporates an E-W collector road through this site generally in alignment with the CTP roadway (shifted to the south so as to avoid the existing pond). Shifting this road to the south to avoid environmentally protected areas brought it even closer to the existing Perry Curtis Road. Based on the analysis and results of the TIA provided for this development specifically, the necessary placement of this road closer to Perry Curtis Road, and the analysis conducted within the Town's Adopted CTP plan, the applicant sees no cause or justification for a 4-lane roadway in this location. Per the Town of Zebulon's Future 2045 Roadway Deficiency Map, Perry Curtis Road is shown as being 'Under Capacity' without any new roadway construction. Dory Meadows would provide a new 2-lane collector road with dedicated bike lanes, free of any residential driveways - creating an alternative route to Perry Curtis Road with better access management. Thus, it would help alleviate traffic congestion on Perry Curtis Road.



5

ZONING CONDITIONS / REQUESTED DEVIATIONS

UNIFIED DEVELOPMENT ORDINANCE (UDO) CONSISTENCY

Dory Meadows has been designed to meet the requirements of the Unified Development Ordinance where practical and achievable. There are some instances where due to site constraints or desires to maximize open space preservation or housing affordability through more compact design, it is reasonable to deviate from the specific requirements of the Ordinance. In those instances, the applicant is proposing design alternatives that will meet the intent of the Ordinance. The requested modifications to the requirements of the UDO, and the proposed alternative methods of compliance, are listed below.

MODIFICATIONS TO DRIVEWAY ORIENTATION / ACCESS

The Town of Zebulon UDO requires that any lot less than 70' in width be accessed via rear lane access (or side on a corner lot).

- In order to accommodate a more compact design that supports preservation of environmental sensitive features, this project would permit front-loading of SFD detached lots 40' and larger (the majority of front-loading homes shall be 60' or wider). The applicant has offered tailored architectural standards for these units as a condition of the zoning approval.

MODIFICATIONS TO SFD DETACHED LOT DIMENSIONAL STANDARDS

To facilitate a more compact design and support preservation of open space and environmental sensitive features, Dory Meadows proposes the following modifications to SFD dimensional standards (based on the R4 district). The applicant has offered tailored architectural standards for all SFD as a condition of the zoning approval.

	UDO Requirement (R4)	Proposed Standard	Notes
Min Lot Area	6000+ SF	4500 SF	6000 SF allowed in Conservation Sub.
Min Lot Width	70'	40'	Majority of FL lots are Min. 60'
Front Setback (min)	30'	20' (10' for Rear-Load SFD)	20' normally allowed for porch
Rear Setback (min)	25'	20'	5' allowed in Conservation Subdiv.
Side Setback (min)	10'	3' or 5' (based on lot width)	5' allowed in Conservation Subdiv.
Raised Entrance (min)	18 inches	12 inches	

MODIFICATIONSTO TOWNHOME DIMENSIONAL STANDARDS

To facilitate a more compact design and support preservation of open space and environmental sensitive features, Dory Meadows proposes custom Townhome dimensional standards, based on individual townhome lots, rather than townhome buildings. These custom Townhome dimensional standards are contained within Section 3 of this document, and copied below for reference.

TOWNHOUSE DWELLING DIMENSIONAL STANDARDS

- Min. Lot Area: 2000 SF
- Min. Street Setback (front or corner): 5' (20' for face of garage on front-loaded units)
- Min. Side Setback: N/A
- Min. Rear Setback: 20'
- Min. Building Separation: 10'
- Max Building Height: 42' / 3 stories
- Min. Lot Width: 20' (24' for end units)

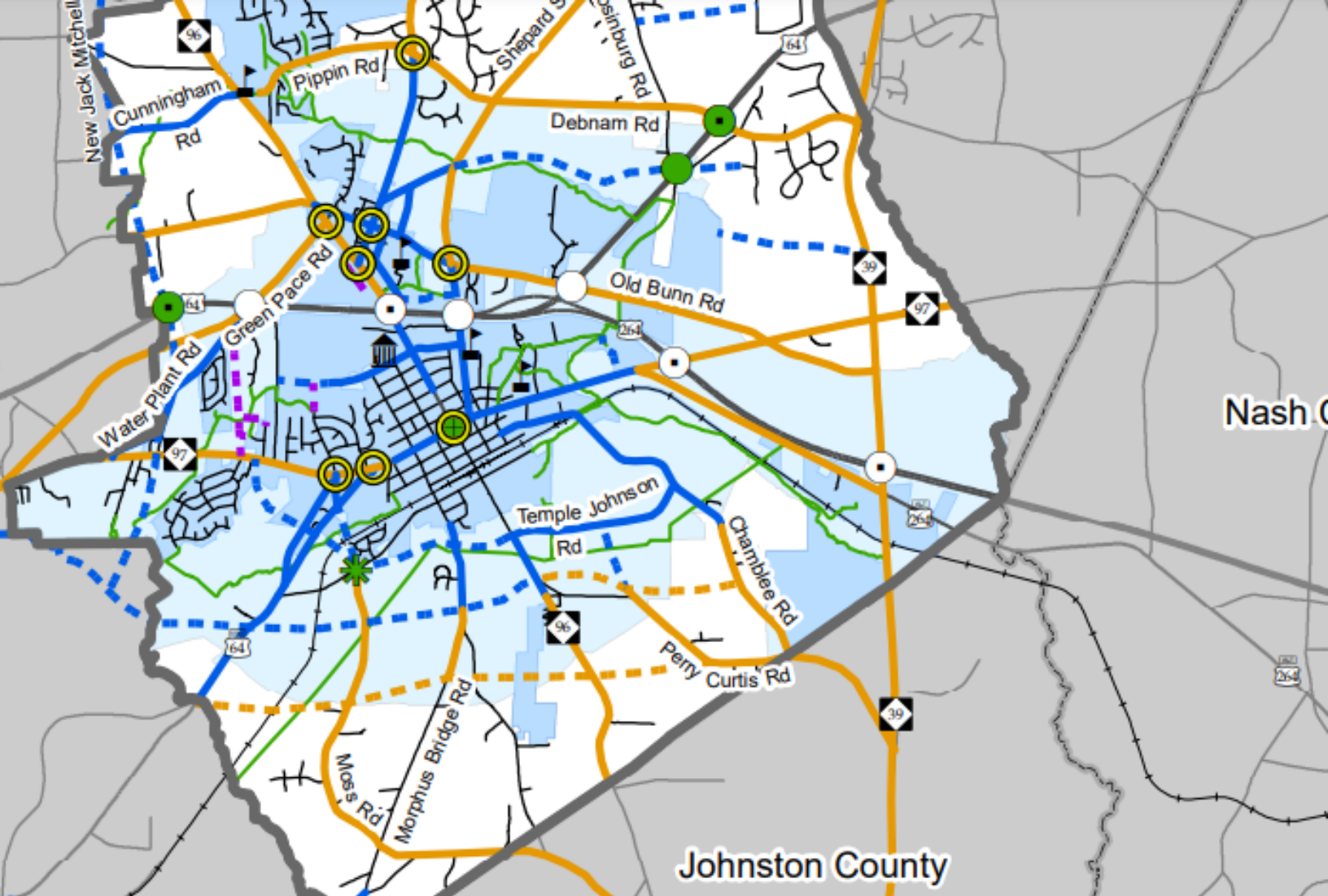
UNIFIED DEVELOPMENT ORDINANCE (UDO) CONSISTENCY

MODIFICATIONS TO COMPREHENSIVE TRANSPORTATION PLAN (CTP) ROADWAY WIDTH

The adopted Comprehensive Transportation Plan (CTP) calls for a 4-lane divided roadway to traverse the northern portion of this property, west of Chamblee Road. As explained in the 'Plan Consistency' section of this document, there is strong justification for a smaller road section to be applied. As such, this planned development shows a proposed 2-lane collector road with bike lanes generally following the plan's E-W alignment (shifted south to avoid existing protected environmental features).

MODIFICATIONS TO MAX LOT COVERAGE

Typical UDO standards for the R4 district would apply a maximum lot coverage of 35% (or 75 % in a Conservation Subdivision). Rather than apply a per lot Lot Coverage max, Dory Meadows will apply a 35% maximum impervious requirement for the development as a whole (based on total acreage).



6

TRANSPORTATION ANALYSIS

TRANSPORTATION IMPACT ANALYSIS SUMMARY

A Traffic Impact Analysis (TIA) was conducted by McAdams for the proposed development in accordance with the Zebulon (Town) Unified Development Ordinance (UDO) and North Carolina Department of Transportation (NCDOT) capacity analysis guidelines. A full copy of the TIA will be submitted for review and approval with the PD submittal. A summary of the recommended traffic improvements is provided on the following page for reference.

STUDY AREA

The study area for the TIA was determined through coordination with the Town and NCDOT and consists of the following existing intersections:

- > Chamblee Road/ E. Horton Street and Temple-Johnson Road
- > NC 96 and Temple-Johnson Road
- > NC 96 and Perry Curtis Road
- > Perry Curtis Road and Perry Ridge Court
- > Perry Ridge Court and Ridge Valley Way
- > Perry Curtis Road / Wake County Line Road and Chamblee Road
- > NC 39 and Wake County Line Road
- > NC 39 and Old US 264
- > Chamblee Road and Site Drive #1
- > Chamblee Road and Site Drive #2
- > Chamblee Road and Site Drive #3

RECOMMENDED IMPROVEMENTS

Based on the analysis of the TIA (including improvements to be installed by the adjacent Sidney Creek development), the following improvements have been recommended to be constructed by the developer to mitigate traffic impacts by the proposed development.

Chamblee Road and Site Drive #1

- > Construct Site Drive #1 as the westbound approach with one (1) ingress lane and one (1) egress lane.
 - o Note: This intersection will be restricted to right-in/right-out operations.
- > Provide stop control on the westbound approach of the site drive.

Chamblee Road and Site Drive #2

- > Construct Site Drive #2 with a full movement eastbound and westbound approach with one (1) ingress lane and one (1) egress lane each, respectively.
- > Provide stop control on the eastbound and westbound approaches of the site drives.

Chamblee Road and Site Drive #3

- > Construct Site Drive #3 as a full movement eastbound approach with one (1) ingress lane and one (1) egress lane.
- > Provide stop control on the eastbound approach of the site drive.



7

RECREATIONAL OPEN SPACE + AMENITIES

RECREATIONAL OPEN SPACE AND AMENITIES

Dory Meadows will provide a diverse offering of active and passive recreation areas within the development. In total, over 33% of the gross acreage will be set aside as some form of open space.

Open Space Standards

- › Total open space required: 13.6 Acres (10% gross site area)
- › Total open space provided: +/- 55 Acres

- › Active open space required 3.4 Acres
- › Active open space provided 3.5 Acres
- › Passive open space provided +/- 51 Acres

Dory Meadow's recreational open space will be anchored by a primary amenity site centrally located along a new E-W collector road, utilizing a large existing pond as the backdrop to this active open space. A pedestrian trail network will circle the existing pond, and supporting park spaces will be provided to the east and west for convenient access for all neighborhood residents (including the portion on the east side of Chamblee Road). The primary amenity site will incorporate a pool and clubhouse, while the site's other active open spaces shall incorporate such elements as trails, playgrounds, a dog park, and outdoor living space.





8

INFRASTRUCTURE

STREETS + SIDEWALKS

All streets within Dory Meadows shall be designed to meet the standards of the Town of Zebulon, except as otherwise modified by this document or its associated concept plan set.

- Frontage along Chamblee Road shall be improved to the Town's ultimate cross-section along the project's half of the centerline.
- Due to the site's very limited frontage on Perry Curtis Road, a fee in lieu of widening is requested.
- All proposed roads shall be public right-of-way.
- All proposed roads shall have sidewalks on both sides of the road.

STORMWATER

The proposed development will require stormwater management measures for quality and quantity treatment in accordance with the Town of Zebulon's adopted stormwater ordinance (enforced by Wake County). A network of storm drainage conveyances will transport storm drainage from impervious areas to the proposed Stormwater Control Measures (SCM). Preliminary locations of these SCMS are provided in the Concept Plan which accompanies this planned development request, based on existing drainage basins. Location and adequate sizing for these devices will be verified during final design. All stormwater management will be required to meet North Carolina Department of Environmental Quality and Town of Zebulon design requirements at the time of site construction drawing submittal.

WATER & SEWER

There are two existing waterline stubs to the south side of the Town of Wendell. Each stub is a 6" main, one being on the south side of the Zebulon Community Park of South Arendell Avenue (HWY 96) and the other is stubbed 500' south of the intersection of East Horton Street and the Norfolk Southern Rail right of way. In either case, a 12" water main would tie to the 6" stub and extend to the property from the south side of the Town of Wendell. The preferred alignment would be to utilize the HWY 96 NCDOT right of way and extend the watermain on the north side of Perry Curtis Road to the subject property. That water main would pass through the subject site and connect to an existing 12" water main stub that was placed with the Sydney Creek Subdivision east of the subject development. The Sydney Creek site pulls water from the CORPUD water network existing off Old US HWY 264. This site, Chamblee Road, will create a grid network with two feeds, providing a much great resiliency in this southern side of Zebulon on the very outer reach of CORPUD's distribution system.

There is an existing waste water treatment facility that the Town of Zebulon built along the Little Creek system (Little Creek WWTP) that CORPUD assumed control/ownership over when the merger happened in the early 2000's. From the existing WWTP, there is a sewer main that runs west of the little creek WWTP to serve the Sydney Creek subdivision. This 8" sewer main ties to the upstream receiving SSMH for the WWTP, and then runs over the creek to serve the wester side of this creek. The Chamblee Road site can gravity sewer to an existing 8" stub that is proposed with the Sydney Creek Phase 2 development approved by CORPUD. A sewer analysis is being performed to validate the capacity of this existing 8" sewer system. It is envisioned that the entirety of the proposed development will be served by the 8" sewer stub and any ensuing upsizing of that receiving gravity line that ties directly to the Little Creek WWTP.

REZONING OF PROPERTY CONSISTING OF +/- 136 ACRES,
LOCATED ALONG CHAMBLEE ROAD AND PERRY CURTIS ROAD,
IN THE TOWN OF ZEBULON

REPORT OF NEIGHBORHOOD MEETING WITH
NEIGHBORING PROPERTY OWNERS AND TENANTS
ON OCTOBER 17, 2022

Pursuant to applicable provisions of the Zebulon Unified Development Ordinance, a neighborhood meeting was held with respect to a potential rezoning with neighboring property owners and tenants on Monday, October 17, 2021, from 5:00 p.m. to 7:00 p.m. The property considered for this potential rezoning totals approximately 136 acres, and is located along Chamblee Road and Perry Curtis Road, in the Town of Zebulon, having Wake County Parcel Identification No. 2715101559. This meeting was held at the Zebulon Community Center (301 S Arendell Ave, Zebulon, NC 27597) from 5:00pm to 7:00pm. All owners and tenants of property within 300 feet of the subject property were invited to attend the meeting.

Attached hereto as **Exhibit A** is a copy of the neighborhood meeting notice. A copy of the required mailing list for the meeting invitations is attached hereto as **Exhibit B**. The sign-in sheet showing the individuals who attended the meeting is attached hereto as **Exhibit C**. A summary of the items discussed at the meeting (issue/response sheet) is attached hereto as **Exhibit D**. The meeting presentation showing zoning maps and reduced plans is attached hereto as **Exhibit E**. Attached as **Exhibit F** is the required Affidavit of Conducting a Neighborhood Meeting.

EXHIBIT A – NEIGHBORHOOD MEETING NOTICE



NOTICE OF NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town’s website or disclosed to third parties.

Dear Neighbor:

You are invited to a neighborhood meeting to review and discuss the development proposal at:

(Addresses) _____ (Pin Numbers) _____

in accordance with the Town of Zebulon Neighborhood Meeting procedures. This meeting is intended to be a way for the applicant to discuss the project and review the proposed plans with adjacent neighbors and neighborhood organizations before the submittal of an application to the Town. This provides neighbors an opportunity to raise questions and discuss any concerns about the impacts of the project before it is officially submitted. Once an application has been submitted to the Town, it may be tracked using the Interactive Development Map located on the Town of Zebulon website at https://www.townofzebulon.org/services/planning.

A Neighborhood Meeting is requested because this project will include:

- Conditional Rezoning
Planned Unit Development
Site Plan within the Downtown Core or Downtown Periphery Zoning Districts
Zoning Map Amendment (results in more intensive uses or increased density)
Special Use Permit (Quasi-Judicial Hearing)
*Quasi-Judicial Hearing: The Board of Commissioners cannot discuss the project prior to the public hearing.

The following is a description of the proposed (also see attached map(s) and/or plan sheet(s)):

Estimated Submittal Date: _____

MEETING INFORMATION:

Property Owner(s) Name(s) _____

Applicant(s) _____

Contact Information (e-mail/phone) _____

Meeting Address: _____

Date of Meeting: _____

Time of Meeting: _____

**Meetings shall occur between 5:00 p.m.-9:00 p.m. on a Monday through Thursday (excluding Town recognized holidays). If you have questions about the general process for this application, please contact the Planning Department at 919-823-1809. You may also find information about the Zebulon Planning Department and on-going planning efforts at https://www.townofzebulon.org/services/planning



PROJECT CONTACT INFORMATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Development Contacts:		
Project Name:		Zoning:
Location:		
Property PIN(s):		Acreage/Square Feet:
Property Owner:		
Address:		
City:	State:	Zip:
Phone:		Email:
Developer:		
Address:		
City:	State:	Zip:
Phone:	Fax:	Email:
Engineer:		
Address:		
City:	State:	Zip:
Phone:	Fax:	Email:
Builder (if known):		
Address:		
City:	State:	Zip:
Phone:	Fax:	Email:



INFORMATION PACKET FOR NEIGHBORHOOD MEETINGS

PROVIDING INPUT TO THE PLANNING BOARD OR BOARD OF COMMISSIONERS:

Each Board of Commissioners meeting agenda includes a Public Forum time when anyone is permitted to speak for three (3) minutes on any topic with the exception of items listed as Public Hearings for that meeting. The Board of Commissioners meets on the 1st Monday of each month at 7:00 p.m. and Joint Public Hearings are scheduled for the 2nd Monday of every Month. (except for holidays, see schedule of meetings at <https://www.townofzebulon.org/agendas-minutes>. You may also contact Board of Commissioners at <https://www.townofzebulon.org/government/board-commissioners>.

PRIVATE AGREEMENTS AND EASEMENT NEGOTIATION:

The Town of Zebulon cannot enforce private agreements between developers and neighbors and is not a party to the easement and right-of-way negotiation that occurs between developers and neighboring property owners for easements or rights-of-way that are necessary to build the project.

It is recommended that all private agreements be made in writing and that if a property owner feels it necessary, they should obtain private legal counsel in order to protect their interests in both private agreements and during easement negotiations. The only conditions that the Town of Zebulon can enforce are those conditions that are made a part of the conditional zoning of the property by agreement of the developer and the Town.

As an example, if a developer offers to build a fence for a neighbor to mitigate some impact, the Town can only enforce the construction of the fence if the fence becomes a condition of the rezoning. This would occur by the developer offering the condition as part of their conditional zoning application package or at the Joint Public Hearing on the conditional zoning and the Town accepting it as a condition. Private agreements regarding a fence being constructed will not be enforced by the Town.

To request that any agreement with a developer is made a part of the conditional zoning at the time of approval, you may ask at the public hearing if the agreement is included in the conditions. If it is not, you may request that the Board of Commissioners not approve the rezoning without the agreement being included in the conditions (note that it is up to Board of Commissioners whether to approve or deny the rezoning but they cannot impose conditions that the applicant does not agree to add). The developer's proposed conditions can be viewed any time after a rezoning is submitted on the Town of Zebulon Interactive Development Map which can be found at: <https://www.townofzebulon.org/services/planning/whats-coming-zebulon>

DOCUMENTATION:

Neighbors to a requested new development and/or rezoning are strongly encouraged to fully document (such as through dated photographs) the condition of their property before any work is initiated for the new development. Stormwater controls installed on developed property are not designed to and will likely not remove 100% of the soil particles transported by stormwater runoff. As a result, creeks and ponds could become cloudy for a period of time after rain events.

Chamblee Rd Planned Dev. – Neighborhood Meeting Agenda

Location: 301 S Arendell Ave., Zebulon NC 27597 (Zebulon Community Center – Yoga Room)

Date: October 17, 2022

Time: 5:00 P.M. – 7:00 P.M.

Agenda details:

5:00 PM Welcome & Introductions

5:05 PM Purpose of the Meeting

5:10 PM Planned Development Review Process

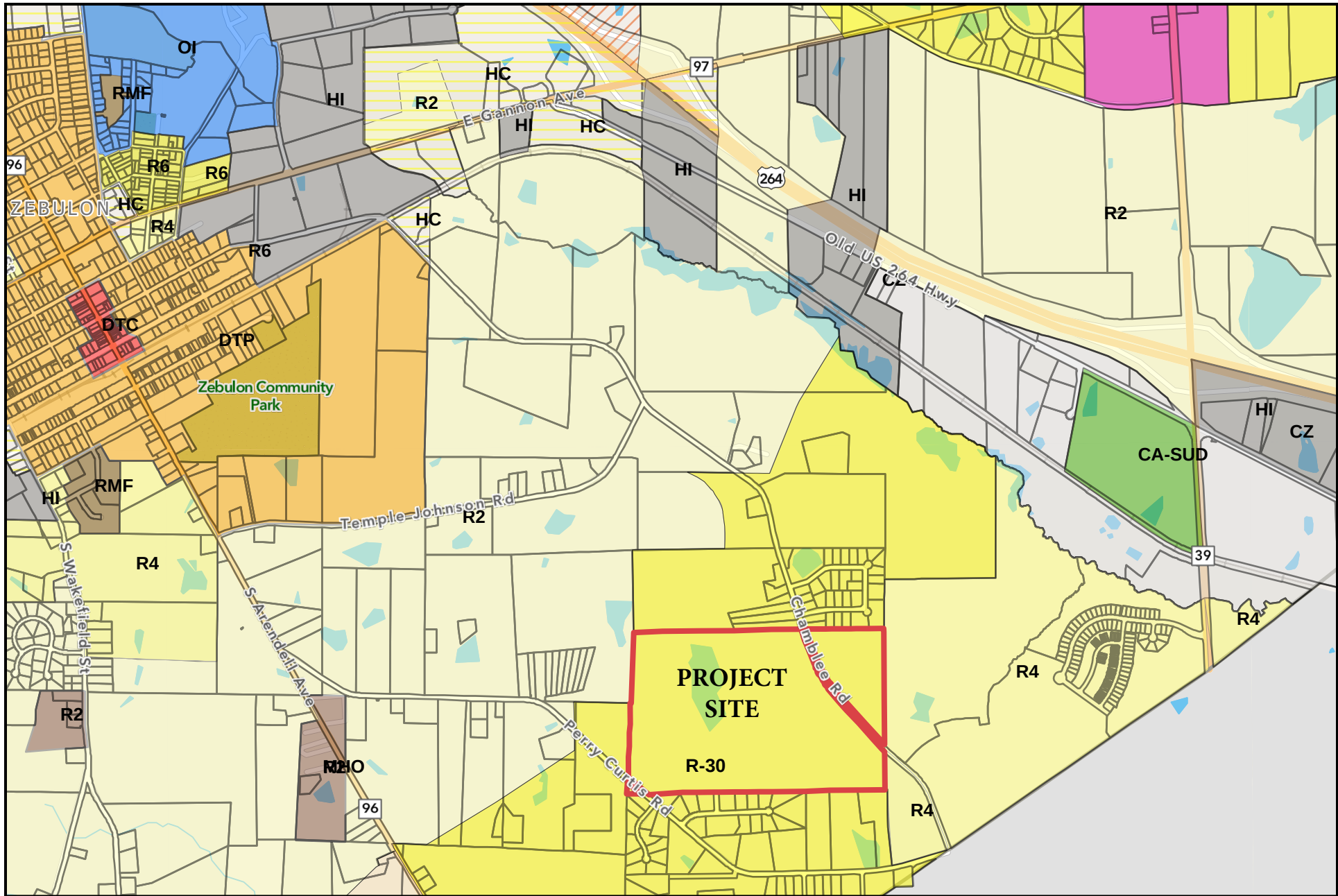
5:15 PM Project Overview

- A. Description of Property
- B. Current Zoning
- C. Policy Guidance
- D. Proposed Zoning
- E. Future Meetings

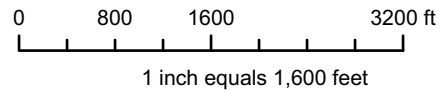
5:45 PM Question and Answer Period

7:00 PM Adjourn

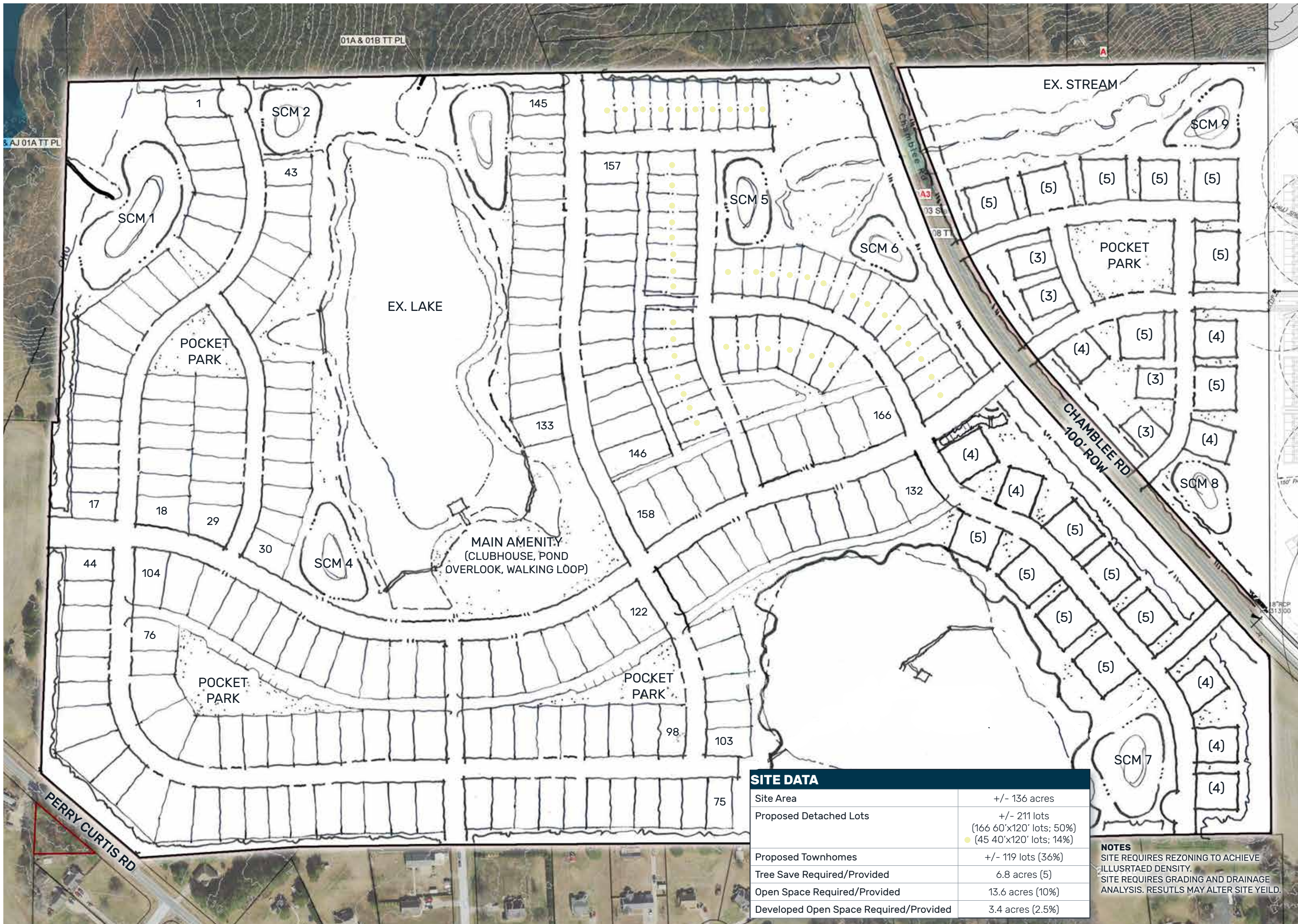
Note: Project description will be repeated for those unable to arrive at 5 PM. Handouts with the proposed concept plan will be available at the neighborhood meeting.



**Chamblee Rd PD - Vicinity Map
& Existing Zoning**



Disclaimer
 iMaps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are **NOT** surveys. No warranties, expressed or implied, are provided for the data therein, its use, or its interpretation.



SITE DATA	
Site Area	+/- 136 acres
Proposed Detached Lots	+/- 211 lots (166 60'x120' lots; 50%) ● (45 40'x120' lots; 14%)
Proposed Townhomes	+/- 119 lots (36%)
Tree Save Required/Provided	6.8 acres (5)
Open Space Required/Provided	13.6 acres (10%)
Developed Open Space Required/Provided	3.4 acres (2.5%)

NOTES
 SITE REQUIRES REZONING TO ACHIEVE ILLUSRTAED DENSITY.
 SITE REQUIRES GRADING AND DRAINAGE ANALYSIS. RESULTLS MAY ALTER SITE YIELD.



SCALE: 1" = 200'

EXHIBIT B – NOTICE MAILING LIST

STRICKLAND, FRANCES MARIE STRICKLAND,
ROGER L

1101 FIELD MEADOWS DR

ZEBULON NC 27597-6852

FOUNTAIN, JAMES I III FOUNTAIN, LAURA E

10405 PERRY RIDGE CT

ZEBULON NC 27597-6844

HERNDON, JAMES M

1521 CARROLL HEIGHTS RD

ZEBULON NC 27597-9641

KILLETTE, PHILLIP KILLETTE, LINDA W

929 PERRY CURTIS RD

ZEBULON NC 27597-8886

DOZIER, CLARA RHODES

255 DAVIS RD

ZEBULON NC 27597-7046

PATE FAMILY I LTD PTNRP

2333 ZEBULON RD

ZEBULON NC 27597-8155

BRODEUR, MADELINE

10413 PERRY RIDGE CT

ZEBULON NC 27597-6844

SESSOMS, SHARON

10416 PERRY RIDGE CT

ZEBULON NC 27597-6843

HINTON, REBECCA H

409 S ARENDELL AVE

ZEBULON NC 27597-2807

TORRES, BENITO TORRES, EMMA

10300 PERRY RIDGE CT

ZEBULON NC 27597-6841

LIVERMAN, LORAIN E A

1404 CHAMBLEE RD

ZEBULON NC 27597-9668

POOLE, JOSHUA

1516 CARROLL HEIGHTS RD

ZEBULON NC 27597-9640

LASKIN, RHONDA ANN

1513 CARROLL HEIGHTS RD

ZEBULON NC 27597-9641

CRENSHAW, BARRY A

833 PERRY CURTIS RD

ZEBULON NC 27597-8884

MITCHELL, FRANK W MITCHELL, JANE H

504 PERRY CURTIS RD

ZEBULON NC 27597-8877

KHALIOUI, YOUNES

1520 CARROLL HEIGHTS RD

ZEBULON NC 27597-9640

HINNANT, HULEY JR HINNANT, GERALDINE

10409 PERRY RIDGE CT

ZEBULON NC 27597-6844

HERNDON, JAMES M MASSENGILL,
COLLEEN J

1521 CARROLL HEIGHTS RD

ZEBULON NC 27597-9641

CHAMBLEE, R M HEIRS ; C/O JIM EDWARDS

2711 ROYSTER ST

RALEIGH NC 27608-1529

HARBAR, LINDA WATKINS, ANGELA

1501 CARROLL HEIGHTS RD

ZEBULON NC 27597-9641

SHERROD, THELMA M

1505 CARROLL HEIGHTS RD

ZEBULON NC 27597-9641

BOONE, CHARLES E

1509 CARROLL HEIGHTS RD

ZEBULON NC 27597-9641

MITCHELL, F WADDELL MITCHELL, JANE H

504 PERRY CURTIS RD

ZEBULON NC 27597-8877

KILLETTE, PHILLIP KILLETTE, LINDA W

929 PERRY CURTIS RD

ZEBULON NC 27597-8886

ROBERTSON, ROBERT J

1512 CARROLL HEIGHTS RD

ZEBULON NC 27597-9640

KIRIAZES, KENNETH E KIRIAZES, MARIE A

10401 PERRY RIDGE CT

ZEBULON NC 27597-6844

SMITH, KENNETH R SMITH, TONYA K

10417 PERRY RIDGE CT

ZEBULON NC 27597-6844

FAULKNER, AUBREY LEROY FAULKNER,
PEGGY

10404 PERRY RIDGE CT

ZEBULON NC 27597-6843

GRISWOLD RENTAL & REAL ESTATE INC

2021 WYNNSCOTT FARM LN

ZEBULON NC 27597-7392

HAUGH, PAUL G HAUGH, HEATHER W

1532 CARROLL HEIGHTS RD

ZEBULON NC 27597-9640

MOZINGO, JUDY B
708 PERRY CURTIS RD
ZEBULON NC 27597-8881

SARNA, KERRY RICHARD
1001 RIDGE VALLEY WAY
ZEBULON NC 27597-6845

WILLIAMS, GEORGETTE
1413 CHAMBLEE RD
ZEBULON NC 27597-9669

GORE, KAY
10412 PERRY RIDGE CT
ZEBULON NC 27597-6843

FOCA, KIMBERLY
706 PERRY CURTIS RD
ZEBULON NC 27597-8881

BAKER, ASHLEY N
10408 PERRY RIDGE CT
ZEBULON NC 27597-6843

OLVERA, RAMON HERNANDEZ
1100 FIELD MEADOWS DR
ZEBULON NC 27597-6852

JUAREZ, PEDRO CARREON JUAREZ, MARIA
DEL
1408 CHAMBLEE RD
ZEBULON NC 27597-9668

LAND, MARK LAND, PAMELA
10400 PERRY RIDGE CT
ZEBULON NC 27597-6843

KRS AND ASSOCIATES INC
1001 RIDGE VALLEY WAY
ZEBULON NC 27597-6845

DAN RYAN BUILDERS - NORTH CAROLINA
LLC
2099 GAITHER RD STE 600
ROCKVILLE MD 20850-4018
TELLEZ MAGANA, MARIA TERESA
1508 CARROLL HEIGHTS RD
ZEBULON NC 27597-9640

HOAD, RYAN PATRICK HOAD, JAMIE LEIGH
10421 PERRY RIDGE CT
ZEBULON NC 27597-6844

DRSFA LLC
2099 GAITHER RD STE 600
ROCKVILLE MD 20850-4018

CHAMBLEE, CAROLYN P
1922 TRAWICK RD
RALEIGH NC 27604-3839

GONZALEZ, ALFONSO GONZALEZ
10303 PERRY RIDGE CT
ZEBULON NC 27597-6842

ALVAREZ-CORNEJO, AZUCENA
1104 FIELD MEADOWS DR
ZEBULON NC 27597-6852

MCNABB, WILLIAM R
204 W GANNON AVE
ZEBULON NC 27597-2626

WALL, JODY C
133 W 1ST ST
WENDELL NC 27591-7600

NUNEZ, RICARDO RODRIGUEZ, ANGELICA
MARIA
10301 PERRY RIDGE CT
ZEBULON NC 27597-6842

EXHIBIT C – MEETING ATTENDEES



INFORMATION PACKET FOR NEIGHBORHOOD MEETINGS

NEIGHBORHOOD MEETING SIGN-IN SHEET:

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Project Name: Chamblee Road Planned Development
 Meeting Address: 301 S Arendell Ave, Zebulon, NC 27597
 Date of Meeting: 10/17/2022 Time of Meeting: 5:00-7:00
 Property Owner(s) Names: RM Chamblee & Heirs
 Applicants: McAdams

Please print your name below, state your address and/or affiliation with a neighborhood group, and provide your phone number and email address. Providing your name below does not represent support or opposition to the project; it is for documentation purposes only.

	Name/ Organization	Address	Phone#	E-mail
SEE BACK	1 CAROLYN CHAMBLEE	1922 TRAWICK RD, RA	919-286-6098	chamblee5@gmail.com
	2 CHARLIE BOONG & RUTH	1509 CARROLL HETS. RD	919-215-4911	fbird54@gmail.com
	3 Phil & Linda Killette	939 Perry Curtis Rd	919-602-4698	pkillette45@gmail.com
	4 Orange River man	1404 Chamblee Rd	919-758-8869	l-lives61@yahoo.com
	5 Madeline Brodeur	10413 Perry Rd Ct	781-354-4530	madelinebrodeur@gmail.com
	6 James Fountain	10405 Perry Ridge Ct	919-625-3271	jifiii02@gmail.com
	7 Ryan HOAD	10427 Perry Ridge	919-295-2540	hoad.ryan@gmail.com
	8 Jane Mitchell	504 Perry Curtis	910-801-7060	jane.h.mitchell@att.net
	9 Waddell Mitchell	504 Perry Curtis	919-971-7174	jane.h.mitchell@att.net
	10 Tonya Smith	10417 Perry Ridge	919-219-7286	tksmith991@gmail.com
	11 Kenneth Smith	10417 Perry Ridge	919-219-7283	U
	12 Pat Carreon Benito	1408 Chamblee Rd	919-456-9828	monicapetadan@gmail.com
	13			
	14			
	15			
	16			
	17			
	18			
	19			
	20			
	21			
	22			
	23			
	24			
	25			

Attach Additional Sheets If Necessary.

CAROLYN Chamblee —

DWA 40 acres + 1324 Chamblee Rd

EXHIBIT D – ITEMS DISCUSSED



SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town’s website or disclosed to third parties.

Project Name: Chamblee Road Development

Meeting Address: 301 Arendell Ave, Zebulon, NC 27697

Date of Meeting: 10/17/2022 Time of Meeting: 5:00-7:00

Property Owner(s) Names: RM Chamblee and Heirs

Applicants: McAdams

Please summarize the questions/comments and your response from the Neighborhood Meeting in the spaces below (attach additional sheets, if necessary). Please state if/how the project has been modified in response to any concerns. The response should not be “Noted” or “No Response”. There has to be documentation of what consideration the neighbor’s concern was given and justification for why no change was deemed warranted.

Question/ Concern #1 See Attached.

Applicant Response:

Question/ Concern #2

Applicant Response:

Question/ Concern #3

Applicant Response:

Question/ Concern #4

Applicant Response:

10/17/22 Chamblee Rd Neighborhood Meeting Log

- **Concern / Question:** A resident expressed concern over stormwater control along the northern property boundary.
 - **Response:** The development team explained that the proposed development would be subject to a stormwater management plan. The project would have to control post-development runoff such that it did not exceed pre-development runoff levels. The planned stormwater control measures would capture and detain water and then slowly release after rainfall events to prevent flooding.
- **Concern / Question:** A concern was expressed over involuntary annexation of neighboring property.
 - **Response:** The development team explained that only this development's property was being proposed for annexation. Neighboring tracts are not included. Also, state law makes it nearly impossible for the Town to attempt involuntary annexation, even if they were so inclined.
- **Concern / Question:** A question was raised over the current R-30 zoning district and what that allows.
 - **Response:** The development team explained that the current R-30 zoning designation was a Wake County zoning designation that allowed residential lots with a minimum lot size of 30,000 sq. ft.
- **Concern / Question:** A resident asked if this development was associated with the adjacent Sidney Creek development.
 - **Response:** The development team explained that while our project would be adjacent to theirs, the projects are not associated with one another. This project has a different developer and builder. We would have to connect to existing planned road stubs.
- **Concern / Question:** Concerns were expressed over how the proposed connections along Chamblee Road would impact traffic on that road. A resident asked how traffic impacts were studied.
 - **Response:** The development team explained that a Traffic Impact Assessment was required to assess the traffic generated by this site, its associated impacts, and any improvements which may be required to mitigate those impacts. The TIA would account for other planned developments, existing traffic, and project traffic growth into the future. This report would be reviewed by both the Town and NCDOT.
- **Concern / Question:** A concern was raised that the new development would impact the ability of existing residents to discharge their firearms, some of which are higher caliber firearms.
 - **Response:** The development team explained that the new development would be subject to the Town's firearm regulations, but that the existing surrounding development would remain subject to the county's regulations. Residents were encouraged to check the Wake County firearm regulations and contact the county if they had questions.
- **Concern / Question:** Another resident raised concerns over the level of traffic this development would generate and stated that DOT did not have any plans to build new roads in this area in the next 10 years

- **Response:** The development team explained that the TIA's recommended traffic improvements would be funded by developers – NOT DOT or the Town. They explained that many road widening and intersection improvements were conducted by developers as a result of these TIAs, and the private sector could incrementally help provide needed improvements even if DOT didn't have the funding.
- **Concern / Question:** A resident complained that no Town representative was present at the neighborhood meeting.
 - **Response:** The development team stated that the Town was notified of the meeting, but that Town staff had a lot of their own regular meetings that they were required to attend.
- **Concern / Question:** A resident asked about the anticipated price target for the homes in the proposed development.
 - **Response:** The development team explained that with the rate of inflation, changing interest rates, and crazy price fluctuations in home prices, it was impossible to anticipate accurate home prices 2 years from now.
- **Concern / Question:** A resident asked if any environmental study had been conducted.
 - **Response:** The development team stated that environmental studies had been conducted in terms of stream and wetland delineations, which were public record. They stated that additional environmental studies were done to ensure there were no endangered species or protected cultural resources on site. Those studies are not required by the Town and are not public record.
- **Concern / Question:** A resident stated that stormwater drainage would be a big problem for his development. He said that there were existing perking problems, and that stormwater currently drains south and ponds south of the project.
 - **Response:** The development team explained that stream and wetland delineations were performed on the property. Soil evaluations were performed, and no floodplain was present on the site – though we do have wetlands to avoid or mitigate. Geotechnical engineers would drill locations to test for rock and soils types as well. The project would be subject to strict stormwater regulations.
- **Concern / Question:** A resident expressed concern over stormwater control measure maintenance.
 - **Response:** The development team explained that even after development is completed, ongoing inspections would occur by the County to ensure the stormwater control measures continue to perform up to standard. The HOA established for this community would be responsible for addressing any maintenance issues.
- **Concern / Question:** A resident living at 1404 Chamblee Road asked how close our development would be to her land.
 - **Response:** The development team explained that she was not a direct adjoiner. There is at least 1 property between her property and our proposed development site.
- **Concern / Question:** A resident explained that the surrounding neighborhood had tried to get spectrum to add service, but that they hadn't done so. She asked if we would be able to help the existing neighborhood get spectrum services.
 - **Response:** The development team explained that the telecommunication companies controlled where extensions occurred. They explained that the new development

would certainly receive telecommunication service, so that closer proximity could potentially help neighbors get extensions as well.

- **Concern / Question:** Is the developer extending utilities where neighbors could potentially hook on?
 - **Response:** The development team explained that they would be extending water and sewer to serve the proposed development, which would bring it closer to existing neighbors. However, to hook onto municipal water or sewer, residents would need to petition for annexation.
- **Concern / Question:** A resident expressed concern over turning onto Perry Curtis road with the new traffic and opposed the connection into their neighborhood for traffic seeking the shortest path to Perry Curtis road.
 - **Response:** The development team explained that the TIA recommendations would help address some traffic concerns. Furthermore, once the new collector road was extended to Perry Curtis to the west, when the adjacent parcel develops, then that would become the quickest route to Perry Curtis road. David Bergmark explained that this new east-west collector road was generally aligned with a proposed road on the Town's long range transportation plan.
- **Concern / Question:** A resident expressed concerns related to hunting leases on her land and requested a fence along the northern property boundary.
 - **Response:** The development team said they could evaluate their perimeter buffer, but it was not their intent generally to fence single family homes from other single family homes.
- **Concern / Question:** Phil Killet expressed concern over water runoff at the southern corner of our tract (west of Chamblee Road), where our plan showed a street stub at the end of a road with Townhomes. He said he already had drainage issues and he was afraid runoff coming down that road would make it worse.
 - **Response:** The development team pointed out that there was a proposed SCM next to that location, but that they would evaluate his concern.
 - **Plan Change:** Based on this concern, the proposed Planned Development was amended to stop the stubbing road just short of the property line, with a small berm to control drainage and a proposed fee in lieu for the ~20' of unconstructed road. ROW dedication is still proposed to the property line.
- **Concern / Question:** A resident expressed concern that teenagers would trespass onto her land to the north.
 - **Response:** The development team explained that the project would include a number of planned activity zones to give residents a programmed place to gather and recreate, but ultimately trespassing if it occurs would be a law enforcement manner.
- **Concern / Question:** A resident asked if these homes were planned to be rented.
 - **Response:** The development team explained that this development was not being set up as a 'built-to-rent' community.
- **Concern / Question:** A resident asked for details on the proposed buffer along the southern perimeter.

- **Response:** The development team stated that the proposed buffer is the Town of Zebulon's 20' Type B buffer, which would include a combination of canopy trees, understory trees, and shrubs to create a visual screen at different heights.
- **Concern / Question:** A resident asked about he intended size and price of homes.
 - **Response:** The development team explained that a development like this would typically include 1-2 story homes with 2-car garages and Cementous siding like Hardie plank.
- **Concern / Question:** A resident asked about proposed phasing for the project.
 - **Response:** The development team explained that phasing was still being developed, but in general the project would start closer to Chamblee Road before heading west , as sewer would come from the east.
- **Concern / Question:** A resident asked who would maintain the proposed buffer.
 - **Response:** The development team explained that the neighborhood's HOA would be responsible for maintaining required buffers and open space amenities.
- **Concern / Question:** A resident expressed concern over light pollution caused by the development.
 - **Response:** The development explained that their project would be subject to lighting regulations by the town of Zebulon, both at the property line and regulations related to street lighting fixtures.
- **Concern / Question:** A resident complained that he Town's police force was underfunded.
 - **Response:** The development team explained that police and fire representatives would be part of the technical review committee that would review these plans. Furthermore, part of the Town's evaluation for annexation would include an analysis of the anticipated taxes that might come in from annexing the property vs. the cost of providing town services to the annexed areas.
- **Concern / Question:** A resident said that she had been told that this property was subject to use limitations under a land trust.
 - **Response:** The development team said that to the best of their knowledge this land was free of any such encumbrances, but that they would double-check.
- **Concern / Question:** A resident explained that there was a long-standing path that lead through this property that had been used for decades and asked if this established use would establish legal rights to continue to use the path.
 - **Response:** The development team said they were not aware of any such rights established on this property, and a legal case has to be made for such rights.
- **Concern / Question:** A resident expressed concern that development would reduce the amount of farmland in the area, since this property was being used for agricultural purposes.
 - **Response:** The development team said they understood this would take this land out of agricultural use, but that was often true when development occurred in more rural or suburban communities.
- **Concern / Question:** A resident said there was an alligator in the lake on site.
 - **Response:** The development team asked if there really was a gator.
- **Concern / Question:** A resident provided a handout showing a lawsuit had been issued against DR Horton in Louisiana regarding mold damage.

- **Response**: The development team stated that DR Horton was a large national builder and they could only speak to more local standards and builders.
- **Concern / Question**: A resident expressed flooding concerns on Perry Ridge Ct Road, if the new development's traffic were routed through their development.
 - **Response**: The development team explained that stormwater control regulations required that the level of post-development runoff not exceed the current level of runoff occurring in its undeveloped staff.
- **Concern / Question**: A resident expressed concerns over the hours during which construction would occur.
 - **Response**: The development team explained that the proposed development would be restricted by the Town of Zebulon regarding the hours during which construction could occur.
- **Concern / Question**: A resident expressed concern over construction debris and erosion control. She stated this was an issue with the existing Sidney Creek development.
 - **Response**: The development explained that they would be subject to soil and erosion control measures, some of which were specific to the period of initial construction. They said that if there were existing issues, this ultimately came down to a matter of enforcement.

EXHIBIT E – MEETING PRESENTATION

1509 Chamblee Road Development

Neighborhood Meeting

October 17, 2022

Meeting Agenda

- Introductions
- Purpose of the Meeting
- Planned Development Review Process
- Description of Property
- Current Zoning
- Policy Guidance
- Proposed Zoning
- Future Meetings
- Questions / Comments

Planned Development Review Process

**FIGURE 2.2.13 PLANNED DEVELOPMENT:
PLANNED DEVELOPMENT PROCEDURE**

Step	Action
1	Pre-application Conference See Section 2.3.2, Pre-application Conference
2	File Application See Section 2.3.3, Application Filing
3	Completeness Determination See Section 2.3.3.G, Determination of Application Completeness
4	TRC Review of Master Plan See Section 2.3.5, Staff Review and Action
5	Joint Public Hearing Scheduled
6	Public Notice See Section 2.3.6, Public Notice
7	Joint Public Hearing by Planning Board & Board of Commissioners See Section 2.3.7, Public Hearings and Meetings
8	Planning Board Review and Recommendation See Section 2.3.7, Public Hearings and Meetings
9	Board of Commissioners Review and Decision See Section 2.3.7, Public Hearings and Meetings
10	Notification of Decision See Section 2.3.9, Notification of Decision

Overview

- Property consists of 136 acres
- Current Use: Agricultural
- Frontage along Chamblee Road and Perry Curtis Road
- Current Zoning: R-30 (Wake County)
- Future Land Use: Suburban Residential (SR)
- Proposed Zoning: Planned Development (Zebulon)
 - 211 Single Family
 - 119 Townhouse

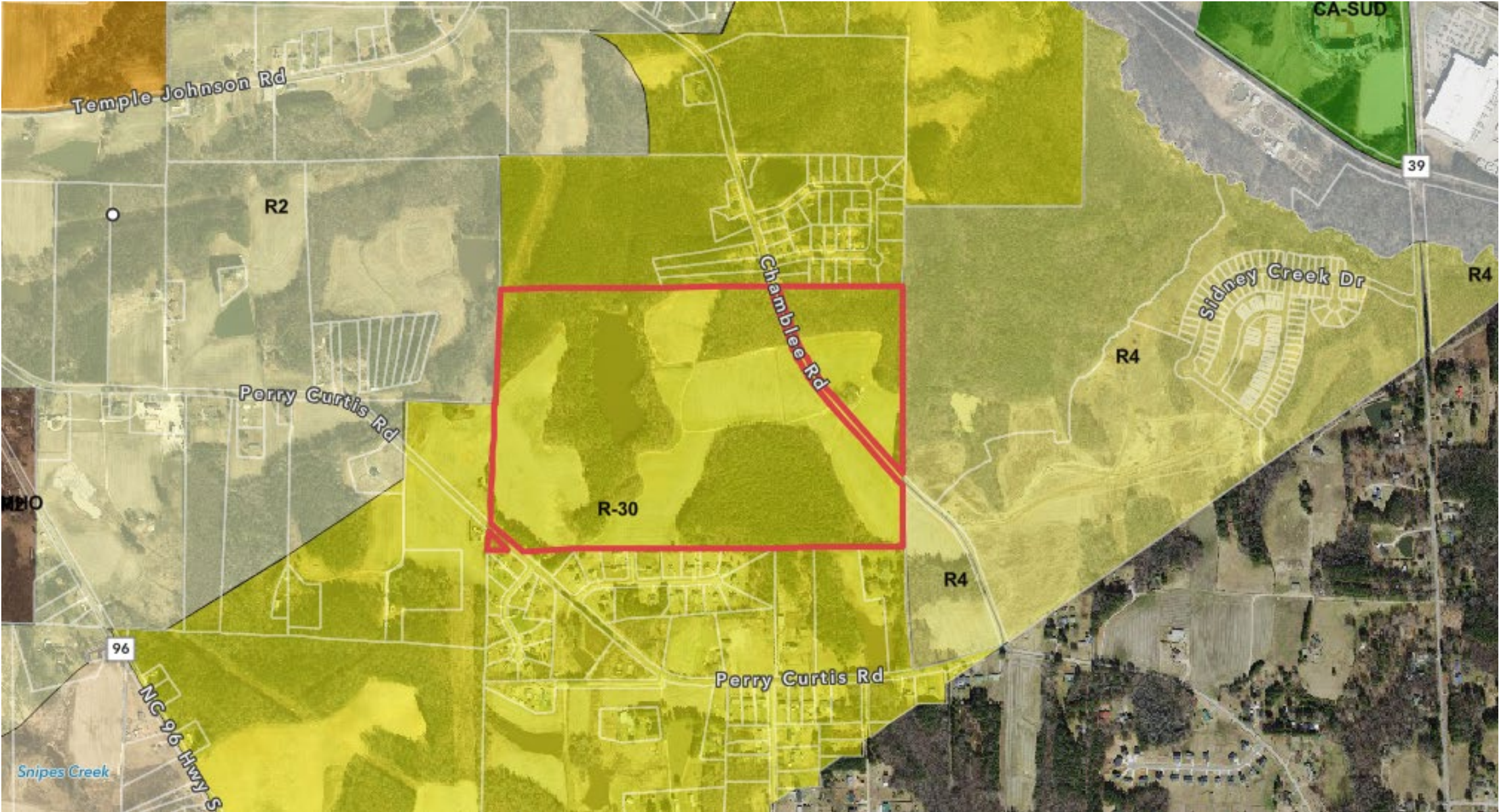
Vicinity Map



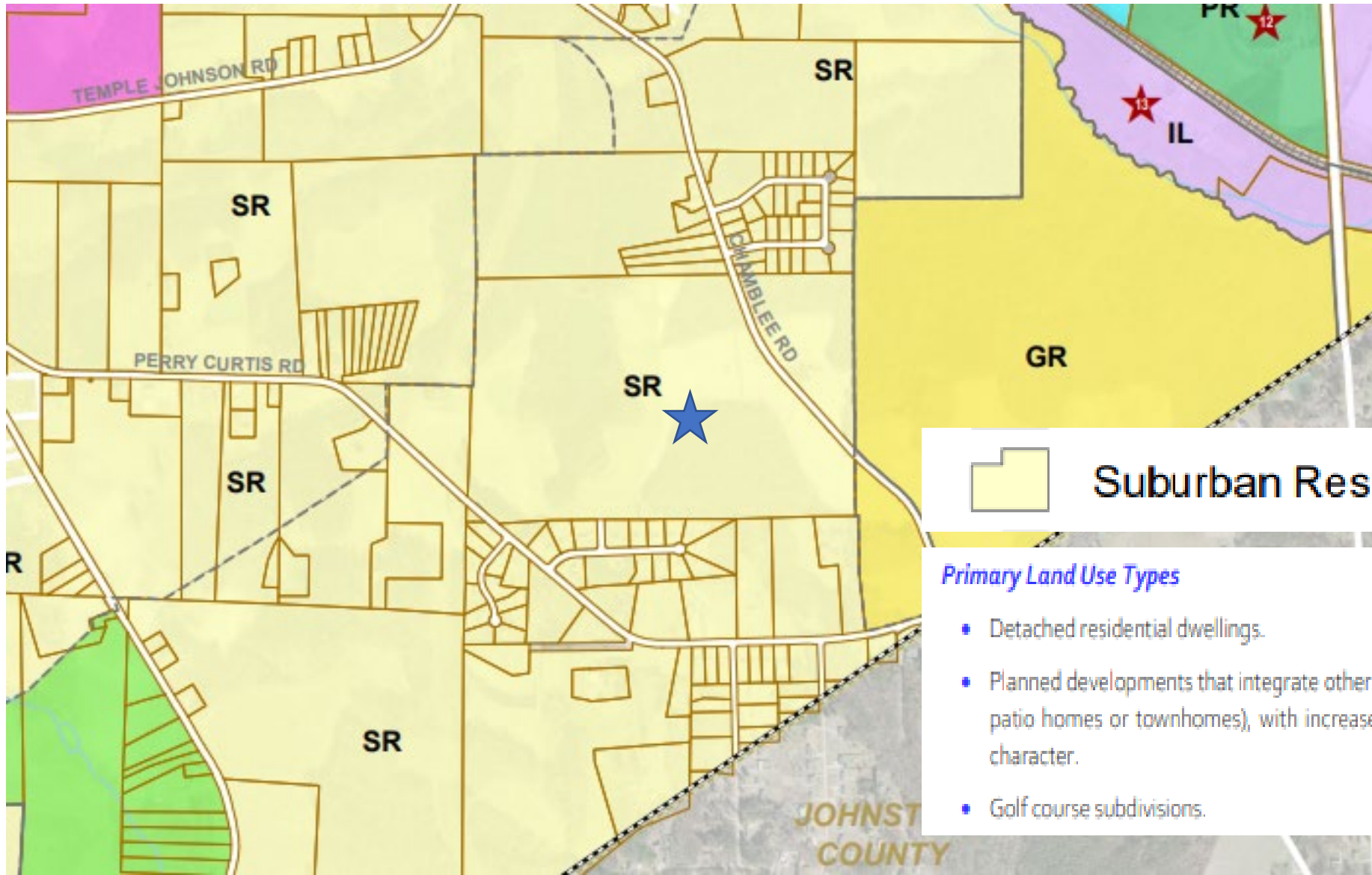
Existing Conditions



Current Zoning



Future Land Use Map



CHAMBLEE RD COMMUNITY CONCEPT PLAN

SITE DATA

Site Area	+/- 136 acres
Total Lots	+/- 330 lots
Proposed Single Family	+/- 211 lots
Proposed Townhomes	+/- 119 lots



Preliminary Zoning Conditions

- The Planned Development Document shall identify zoning conditions and any requested code deviations, such as:
 - Primary Uses: SFD & Townhomes only
 - Reduced SFD lot size (min. 4800 SF & 7200 SF lots; mix of FL & RL)
 - Reduced SFD lot width for front-loaded homes
 - Front loaded Townhomes permitted
 - Proposed Collector road with No residential driveways
 - Architectural conditions
 - Min. Open Space well above code requirements
 - Streetyard Buffers above code requirements

Open Space / Recreation

- Nearly 1/3rd of site retained as Open Space
- Main Amenity along existing lake with Pool, Clubhouse, and Walking Trail.
- Over 15 Acres of Tree Save
- Large Pocket Park in Townhome section east of Chamblee, with smaller pocket parks distributed throughout development.



Overview

- Property consists of 136 acres
- Current Use: Agricultural
- Frontage along Chamblee Road and Perry Curtis Road
- Current Zoning: R-30 (Wake County)
- Future Land Use: Suburban Residential (SR)
- Proposed Zoning: Planned Development (Zebulon)
 - 211 Single Family
 - 119 Townhouse

COMMENTS/QUESTIONS?



David T Bergmark AICP
senior planner, planning + design

direct 919.287.0794 **mobile** 919.449.4005

bergmark@mcadamsco.com

[621 Hillsborough Street, Suite 500, Raleigh, NC 27603](#)

www.mcadamsco.com

Join Our Team



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Attorney

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919-780-5438 (Direct) | 919-645-4300 (Main) | smorris@longleaflp.com

www.longleaflp.com

EXHIBIT F – AFFIDAVIT OF CONDUCTING A NEIGHBORHOOD MEETING



INFORMATION PACKET FOR
NEIGHBORHOOD MEETINGS

AFFIDAVIT OF CONDUCTING A NEIGHBORHOOD MEETING, SIGN-IN SHEET AND ISSUES/RESPONSES SUBMITTAL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

I, Samuel Morris, do hereby declare as follows:
Print Name

1. I have conducted a Neighborhood Meeting for the proposed Rezoning, Major Site Plan, Master Subdivision Plan, or Special Use Permit.

2. The meeting invitations were mailed to the Zebulon Planning Department, all property owners within 300 feet of the subject property and any neighborhood association that represents citizens in the area via first class mail a minimum of 10 days in advance of the Neighborhood Meeting.

3. The meeting was conducted at the Zebulon Community Center (location/address) on 10/17/2022 (date) from 5:00pm (start time) to 7:00pm (end time).

4. I have included the mailing list, meeting invitation, sign-in sheet, issue/response summary, and zoning map/reduced plans with the application.

5. I have prepared these materials in good faith and to the best of my ability.

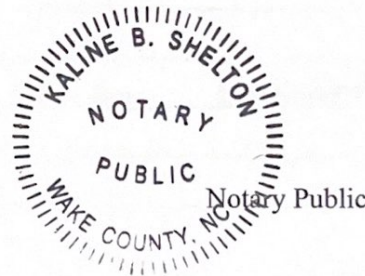
10/18/2022 Date By: [Signature]

STATE OF North Carolina
COUNTY OF Wake

Sworn and subscribed before me, Samuel Morris, a Notary Public for the above State and County, on this the 18th day of October, 20 22.

SEAL

Kaline B. Shelton



Print Name: Kaline B. Shelton

My Commission Expires:

1/26/2025

Certified List of Property Owners (Wake Co. Real Estate Records) - 200 ft buffer applied (instead of 150) to be conservative.

(NOTE: stamped envelopes provided for this full list)

PIN_NUM	OWNER	ADDR1	ADDR2	SITE_ADDRESS
2714081891	STRICKLAND, FRANCES MARIE STRICKLAND, ROGER L	1101 FIELD MEADOWS DR	ZEBULON NC 27597-6852	1101 FIELD MEADOWS DR
2715115366	LIVERMAN, LORAIN A	1404 CHAMBLEE RD	ZEBULON NC 27597-9668	1404 CHAMBLEE RD
2714193007	FOUNTAIN, JAMES I III FOUNTAIN, LAURA E	10405 PERRY RIDGE CT	ZEBULON NC 27597-6844	10405 PERRY RIDGE CT
2715215283	POOLE, JOSHUA	1516 CARROLL HEIGHTS RD	ZEBULON NC 27597-9640	1516 CARROLL HEIGHTS RD
2704984963	MITCHELL, F WADDELL MITCHELL, JANE H	504 PERRY CURTIS RD	ZEBULON NC 27597-8877	504 PERRY CURTIS RD
2714299043	KILLETTE, PHILLIP KILLETTE, LINDA W	929 PERRY CURTIS RD	ZEBULON NC 27597-8886	929 PERRY CURTIS RD
2714282739	CRENSHAW, BARRY A	833 PERRY CURTIS RD	ZEBULON NC 27597-8884	833 PERRY CURTIS RD
2714286726	KILLETTE, PHILLIP KILLETTE, LINDA W	929 PERRY CURTIS RD	ZEBULON NC 27597-8886	905 PERRY CURTIS RD
2715116128	DOZIER, CLARA RHODES	255 DAVIS RD	ZEBULON NC 27597-7046	1412 CHAMBLEE RD
2714080800	MITCHELL, FRANK W MITCHELL, JANE H	504 PERRY CURTIS RD	ZEBULON NC 27597-8877	1108 FIELD MEADOWS DR
2715214284	ROBERTSON, ROBERT J	1512 CARROLL HEIGHTS RD	ZEBULON NC 27597-9640	1512 CARROLL HEIGHTS RD
2705912377	PATE FAMILY I LTD PTNRP	2333 ZEBULON RD	ZEBULON NC 27597-8155	0 PERRY CURTIS RD
2715217214	KHALIOUI, YOUNES	1520 CARROLL HEIGHTS RD	ZEBULON NC 27597-9640	1520 CARROLL HEIGHTS RD
2714191047	KIRIAZES, KENNETH E KIRIAZES, MARIE A	10401 PERRY RIDGE CT	ZEBULON NC 27597-6844	10401 PERRY RIDGE CT
2714195099	BRODEUR, MADELINE	10413 PERRY RIDGE CT	ZEBULON NC 27597-6844	10413 PERRY RIDGE CT
2714194057	HINNANT, HULEY JR HINNANT, GERALDINE	10409 PERRY RIDGE CT	ZEBULON NC 27597-6844	10409 PERRY RIDGE CT
2714197170	SMITH, KENNETH R SMITH, TONYA K	10417 PERRY RIDGE CT	ZEBULON NC 27597-6844	10417 PERRY RIDGE CT
2704995359	HINTON, REBECCA H	409 S ARENDELL AVE	ZEBULON NC 27597-2807	612 PERRY CURTIS RD
2715101559	CHAMBLEE, R M HEIRS; C/O JIM EDWARDS	2711 ROYSTER ST	RALEIGH NC 27608-1529	1509 CHAMBLEE RD
2715211421	HARBAR, LINDA WATKINS, ANGELA	1501 CARROLL HEIGHTS RD	ZEBULON NC 27597-9641	1501 CARROLL HEIGHTS RD
2715219341	HAUGH, PAUL G HAUGH, HEATHER W	1532 CARROLL HEIGHTS RD	ZEBULON NC 27597-9640	1532 CARROLL HEIGHTS RD
2714083747	MOZINGO, JUDY B	708 PERRY CURTIS RD	ZEBULON NC 27597-8881	708 PERRY CURTIS RD
2715116216	JUAREZ, PEDRO CARREON JUAREZ, MARIA DEL	1408 CHAMBLEE RD	ZEBULON NC 27597-9668	1408 CHAMBLEE RD
2715019636	CHAMBLEE, CAROLYN P	1922 TRAWICK RD	RALEIGH NC 27604-3839	0 CHAMBLEE RD
2714098086	SARNA, KERRY RICHARD	1001 RIDGE VALLEY WAY	ZEBULON NC 27597-6845	1001 RIDGE VALLEY WAY
2714097005	GONZALEZ, ALFONSO GONZALEZ	10303 PERRY RIDGE CT	ZEBULON NC 27597-6842	10303 PERRY RIDGE CT
2715212207	WILLIAMS, GEORGETTE	1413 CHAMBLEE RD	ZEBULON NC 27597-9669	1413 CHAMBLEE RD
2714080938	ALVAREZ-CORNEJO, AZUCENA	1104 FIELD MEADOWS DR	ZEBULON NC 27597-6852	1104 FIELD MEADOWS DR
2715410167	DAN RYAN BUILDERS - NORTH CAROLINA LLC	2099 GAITHER RD STE 600	ROCKVILLE MD 20850-4018	0 CHAMBLEE RD
2714383837	MCNABB, WILLIAM R	204 W GANNON AVE	ZEBULON NC 27597-2626	0 CHAMBLEE RD
2714093190	FOCA, KIMBERLY	706 PERRY CURTIS RD	ZEBULON NC 27597-8881	706 PERRY CURTIS RD

2715213285	TELLEZ MAGANA, MARIA TERESA	1508 CARROLL HEIGHTS RD	ZEBULON NC 27597-9640	1508 CARROLL HEIGHTS RD
2715212128	WALL, JODY C	133 W 1ST ST	WENDELL NC 27591-7600	1417 CHAMBLEE RD
2714189947	HOAD, RYAN PATRICK HOAD, JAMIE LEIGH	10421 PERRY RIDGE CT	ZEBULON NC 27597-6844	10421 PERRY RIDGE CT
2714085959	NUNEZ, RICARDO RODRIGUEZ, ANGELICA MARIA	10301 PERRY RIDGE CT	ZEBULON NC 27597-6842	10301 PERRY RIDGE CT
2714091017	OLVERA, RAMON HERNANDEZ	1100 FIELD MEADOWS DR	ZEBULON NC 27597-6852	1100 FIELD MEADOWS DR
2714495712	DRSFA LLC	2099 GAITHER RD STE 600	ROCKVILLE MD 20850-4018	1701 CHAMBLEE RD



CHAMBLEE PROPERTY

Traffic Impact Analysis, Zebulon, NC / November 2022

Prepared by:
McAdams

CHAMBLEE PROPERTY

ZEBULON, NORTH CAROLINA

TRAFFIC IMPACT ANALYSIS

PROJECT NUMBER: DRH22004
PREPARED BY: TYLER HUGGINS
REVIEWED BY: NATE BOUQUIN, PE, PTOE

DATE: NOVEMBER 2022



McADAMS

A handwritten signature in blue ink that reads "Nathaniel Bouquin".

621 HILLSBOROUGH STREET, SUITE 500
RALEIGH, NC 27603
NC Lic. # C-0293

EXECUTIVE SUMMARY

The proposed residential development will be located along Chamblee Road north of Perry Curtis Road in Zebulon, North Carolina. Site access will be served via one (1) right-in/right-out driveway and two (2) full movement driveways on Chamblee Road as well as via a connection to the existing Ridge Valley Way which is stubbed to the southern border of the property. The middle site driveway along Chamblee Road is proposed to be aligned across Chamblee Road, providing access to both sides of the development. The site is currently undeveloped and is expected to consist of a maximum of 211 single family homes and 119 townhomes. The proposed site is expected to be built-out by the year 2027. The purpose of this Traffic Impact Analysis (TIA) is to determine the potential traffic impacts of this development and to identify transportation improvements that may be required to mitigate the impacts on the roadway network.

A Memorandum of Understanding (MOU) was reviewed and approved by the North Carolina Department of Transportation (NCDOT) and the Town of Zebulon (Town), outlining the TIA scope and assumptions. The MOU and approval correspondence is provided in the appendix of this study. Based on the approved scoping, the following intersections are included in this TIA study area:

- > Chamblee Road/ E. Horton Street and Temple-Johnson Road
- > NC 96 and Temple-Johnson Road
- > NC 96 and Perry Curtis Road
- > Perry Curtis Road and Perry Ridge Court
- > Perry Ridge Court and Ridge Valley Way
- > Perry Curtis Road / Wake County Line Road and Chamblee Road
- > NC 39 and Wake County Line Road
- > NC 39 and Old US 264
- > Chamblee Road and Site Drive #1
- > Chamblee Road and Site Drive #2
- > Chamblee Road and Site Drive #3

To determine the traffic impacts of the proposed development, the following analysis scenarios are included in this study:

- > Existing (2022) Traffic Conditions
- > No-Build (2027) Traffic Conditions
- > Build (2027) Traffic Conditions

Peak hour traffic counts were conducted at the existing study intersections in June and October 2022 and balanced between study intersections, as appropriate, to determine Existing (2022) traffic volumes. To account for background development growth, a 3% annual growth rate was applied to the existing traffic volumes and the adjacent development traffic from one approved nearby development, Sidney Creek, was added to determine the No-Build (2027) traffic volumes.

Based on the Institute for Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition, and the suggested method of trip calculations provided in NCDOT's *Rate vs. Equation spreadsheet* trips for the proposed development were calculated for weekday daily, weekday AM peak hour, and weekday PM peak hour. A summary of this trip generation is provided in Table ES-1.

TABLE ES-1: TRIP GENERATION									
Land Use (ITE Code)	Density	Calculation Methodology	Daily Trips	AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Single-Family Detached Housing (210)	211 Units	Adjacent / Equation	2,006	38	109	147	126	74	200
Single-Family Attached Housing (215)	119 Units	Adjacent / Equation	856	17	39	56	38	29	67
TOTAL			2,862	55	148	203	164	103	267

The peak hour site traffic was distributed throughout the network according to the site trip distribution approved by NCDOT and Town staff within the MOU. This site traffic was added onto the No-Build (2027) traffic volumes to determine the Build (2027) traffic volumes for the capacity analysis.

Capacity analysis was conducted at all study intersections according to NCDOT and Town guidelines utilizing the methodology contained in the Institute of Transportation Engineers (ITE) *Highway Capacity Manual*. Refer to Table ES-2 for a summary of the capacity analysis results.

TABLE ES-2: CAPACITY ANALYSIS SUMMARY

Intersection	Conditions	A P P R O A C H	Weekday AM Peak Hour		Weekday PM Peak Hour	
			LOS and Approach Delay (seconds)	Overall Delay (seconds)	LOS and Approach Delay (seconds)	Overall Delay (seconds)
Chamblee Road/ E. Horton Street and Temple-Johnson Road	Existing (2022)	EB ² NB ¹ SB	A (9) A (7) --	N/A	A (9) A (7) --	N/A
	No-Build (2027)	EB ² NB ¹ SB	A (9) A (7) --	N/A	A (9) A (7) --	N/A
	Build (2027)	EB ² NB ¹ SB	A (9) A (7) --	N/A	A (9) A (8) --	N/A
Temple-Johnson Road and NC 96	Existing (2022)	WB ² NB SB ¹	B (11) -- A (8)	N/A	B (11) -- A (8)	N/A
	No-Build (2027)	WB ² NB SB ¹	B (11) -- A (8)	N/A	B (11) -- A (8)	N/A
	Build (2027)	WB ² NB SB ¹	B (12) -- A (8)	N/A	B (12) -- A (8)	N/A
Perry Curtis Road and NC 96	Existing (2022)	WB ² NB SB ¹	B (10) -- A (8)	N/A	B (10) -- A (8)	N/A
	No-Build (2027)	WB ² NB SB ¹	B (11) -- A (8)	N/A	B (12) -- A (8)	N/A
	Build (2027)	WB ² NB SB ¹	B (12) -- A (8)	N/A	B (13) -- A (8)	N/A
Perry Curtis Road and Perry Ridge Court	Existing (2022)	WB ² NB SB ¹	A (9) -- A (7)	N/A	A (9) -- A (7)	N/A
	No-Build (2027)	WB ² NB SB ¹	A (9) -- A (8)	N/A	A (9) -- A (7)	N/A
	Build (2027)	WB ² NB SB ¹	A (9) -- A (8)	N/A	A (9) -- A (8)	N/A
Perry Ridge Court and Ridge Valley Way	Existing (2022)	EB ¹ WB SB ²	A (7) -- A (9)	N/A	A (7) -- A (9)	N/A
	No-Build (2027)	EB ¹ WB SB ²	A (7) -- A (9)	N/A	A (7) -- A (9)	N/A

	Build (2027)	EB ¹ WB SB ²	A (7) -- A (9)	N/A	A (7) -- A (9)	N/A
Perry Curtis Road / Wake County Line Road and Chamblee Road	Existing (2022)	EB ¹ WB SB ²	A (7) -- A (9)	N/A	A (7) -- A (9)	N/A
	No-Build (2027)	EB ¹ WB SB ²	A (7) -- A (9)	N/A	A (8) -- A (10)	N/A
	Build (2027)	EB ¹ WB SB ²	A (7) -- A (10)	N/A	A (8) -- B (11)	N/A
	Existing (2022)	EB ² NB ¹ SB	B (12) A (8) --	N/A	B (13) A (8) --	N/A
Wake County Line Road and NC 39	No-Build (2027)	EB ² NB ¹ SB	B (12) A (8) --	N/A	B (14) A (8) --	N/A
	Build (2027)	EB ² NB ¹ SB	C (17) A (8) --	N/A	C (20) A (9) --	N/A
	Existing (2022)	EB ² WB ² NB ¹ SB ¹	C (16) C (21) A (8) A (8)	N/A	F (76) D (32) A (8) A (8)	N/A
NC 39 and Old US 264	No-Build (2027)	EB WB NB SB	D (38) D (38) C (29) C (25)	C (30)	D (43) D (40) C (32) C (29)	C (33)
	Build (2027)	EB WB NB SB	D (39) D (40) C (29) C (25)	C (31)	D (47) D (47) C (32) C (30)	C (35)
	Build (2027)	WB ¹ NB SB	A (9) -- --	N/A	A (9) -- --	N/A
Chamblee Road and Site Drive #2	Build (2027)	EB ² WB ² NB ¹ SB ¹	A (9) A (10) A (7) A (7)	N/A	B (10) B (10) A (8) A (7)	N/A
Chamblee Road and Site Drive #3	Build (2027)	EB ² NB ¹ SB	A (9) A (7) --	N/A	A (9) A (8) --	N/A

Based on review of adjacent development and background information provided by NCDOT and the Town, the following improvements are expected to be constructed by Sidney Creek and were included in the future year analyses:

NC 39 and Old US 264

- > Monitor for signalization and install once warranted and approved by NCDOT.
- > Construct an exclusive eastbound right-turn lane on Old US 264 with a minimum of 100 feet of full width storage and appropriate deceleration and taper.

- > Construct an exclusive eastbound left-turn lane on Old US 264 with a minimum of 50 feet of full width storage and appropriate deceleration and taper.
- > Construct an exclusive westbound right-turn lane on Old US 264 with a minimum of 125 feet of full width storage and appropriate deceleration and taper.
- > Construct an exclusive westbound left-turn lane on Old US 264 with a minimum of 50 feet of full width storage and appropriate deceleration and taper.
- > Extend the existing southbound left-turn lane on NC 39 to provide a minimum of 100 feet of full width storage and appropriate deceleration and taper.

Based on the findings in the TIA, the improvements below have been recommended to be constructed by the **developer** to mitigate traffic impacts by the proposed development:

Chamblee Road and Site Drive #1

- > Construct Site Drive #1 as the westbound approach with one (1) ingress lane and one (1) egress lane.
 - Note: This intersection will be restricted to right-in/right-out operations.
- > Provide stop control on the westbound approach of the site drive.

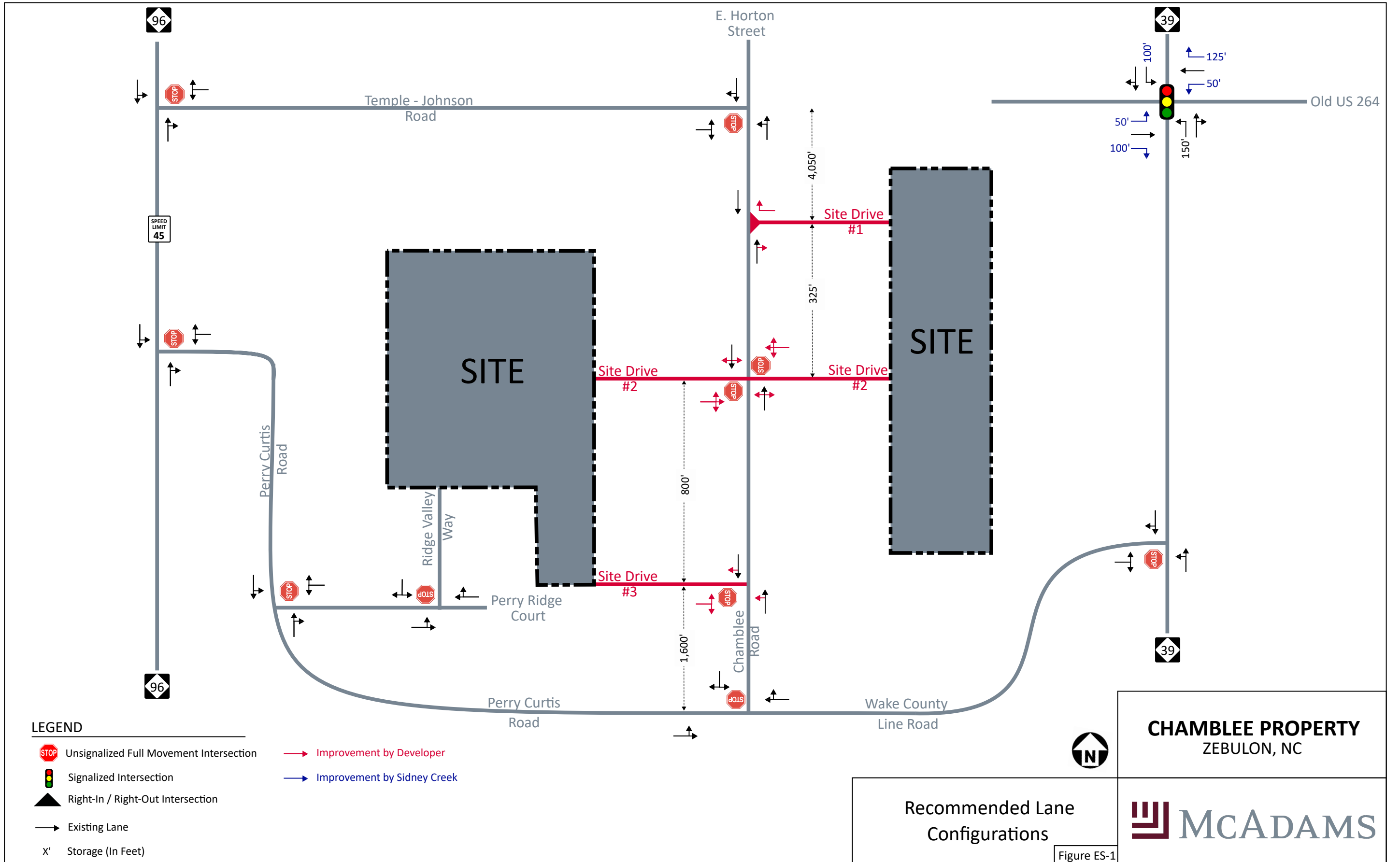
Chamblee Road and Site Drive #2

- > Construct Site Drive #2 with a full movement eastbound and westbound approach with one (1) ingress lane and one (1) egress lane each, respectively.
- > Provide stop control on the eastbound and westbound approaches of the site drives.

Chamblee Road and Site Drive #3

- > Construct Site Drive #3 as a full movement eastbound approach with one (1) ingress lane and one (1) egress lane.
- > Provide stop control on the eastbound approach of the site drive.

Figure ES-1, on the following page, provides a graphical representation of recommended improvements at the study intersections.



96

E. Horton Street

39

Temple - Johnson Road

Old US 264

SPEED LIMIT 45

SITE

SITE

Site Drive #1

Site Drive #2

Site Drive #2

Perry Curtis Road

Ridge Valley Way

Perry Ridge Court

Site Drive #3

Chamblee Road

Perry Curtis Road

Wake County Line Road

39



McADAMS

Recommended Lane Configurations

Figure ES-1

TABLE OF CONTENTS

INTRODUCTION	12
EXISTING CONDITIONS.....	15
NO-BUILD CONDITIONS	19
BUILD CONDITIONS.....	23
CAPACITY ANALYSIS.....	27
CHAMBLEE ROAD + E. HORTON STREET + TEMPLE-JOHNSON ROAD	28
NC 96 + TEMPLE-JOHNSON ROAD	29
NC 96 + PERRY CURTIS ROAD	30
PERRY CURTIS ROAD + PERRY RIDGE COURT	31
PERRY RIDGE COURT + RIDGE VALLEY WAY	32
PERRY CURTIS ROAD / WAKE COUNTY LINE ROAD + CHAMBLEE ROAD.....	33
NC 39 + WAKE COUNTY LINE ROAD	34
NC 39 + OLD US 264	35
CHAMBLEE ROAD + SITE DRIVE #1.....	37
CHAMBLEE ROAD + SITE DRIVE #2.....	38
CHAMBLEE ROAD + SITE DRIVE #3.....	39
CONCLUSION / RECOMMENDATIONS	40

FIGURES

FIGURE 1 – SITE LOCATION MAP	13
FIGURE 2 – SITE PLAN	14
FIGURE 3 – EXISTING LANE CONFIGURATIONS	17
FIGURE 4 – EXISTING (2022) TRAFFIC VOLUMES.....	18
FIGURE 5 – PROJECTED (2027) TRAFFIC VOLUMES	20
FIGURE 6 – ADJACENT DEVELOPMENT SITE TRIPS	21
FIGURE 7 – NO-BUILD (2027) TRAFFIC VOLUMES	22
FIGURE 8 – SITE TRIP DISTRIBUTION.....	24
FIGURE 9 – SITE TRIP ASSIGNMENT.....	25
FIGURE 10 – BUILD (2027) TRAFFIC VOLUMES.....	26
FIGURE 11 – RECOMMENDED LANE CONFIGURATIONS.....	42

TABLES

TABLE 1: ROADWAY CHARACTERISTICS	15
TABLE 2: ADJACENT DEVELOPMENTS.....	19
TABLE 3: TRIP GENERATION	23
TABLE 4: HIGHWAY CAPACITY MANUAL – LEVELS OF SERVICE + DELAY CRITERIA	27
TABLE 5: CAPACITY ANALYSIS SUMMARY OF CHAMBLEE ROAD / E. HORTON STREET + TEMPLE-JOHNSON ROAD	28
TABLE 6: CAPACITY ANALYSIS SUMMARY OF NC 96 + TEMPLE-JOHNSON ROAD	29
TABLE 7: CAPACITY ANALYSIS SUMMARY OF NC 96 + PERRY CURTIS ROAD	30
TABLE 8: CAPACITY ANALYSIS SUMMARY OF PERRY CURTIS ROAD + PERRY RIDGE COURT	31
TABLE 9: CAPACITY ANALYSIS SUMMARY OF PERRY RIDGE COURT + RIDGE VALLEY WAY	32
TABLE 10: CAPACITY ANALYSIS SUMMARY OF PERRY CURTIS ROAD / WAKE COUNTY LINE ROAD + CHAMBLEE ROAD	33
TABLE 11: CAPACITY ANALYSIS SUMMARY OF NC 39 + WAKE COUNTY LINE ROAD	34
TABLE 12: CAPACITY ANALYSIS SUMMARY OF NC 39 + OLD US 264.....	35
TABLE 13: CAPACITY ANALYSIS SUMMARY OF CHAMBLEE ROAD + SITE DRIVE #1.....	37
TABLE 14: CAPACITY ANALYSIS SUMMARY OF CHAMBLEE ROAD + SITE DRIVE #2.....	38
TABLE 15: CAPACITY ANALYSIS SUMMARY OF CHAMBLEE ROAD + SITE DRIVE #3.....	39

APPENDICES

APPENDIX A: MEMORANDUM OF UNDERSTANDING (MOU)

APPENDIX B: COUNT DATA

APPENDIX C: ADJACENT DEVELOPMENT INFORMATION

APPENDIX D: CAPACITY ANALYSIS RESULTS – CHAMBLEE ROAD / E. HORTON STREET + TEMPLE-JOHNSON ROAD

APPENDIX E: CAPACITY ANALYSIS RESULTS – NC 96 + TEMPLE-JOHNSON ROAD

APPENDIX F: CAPACITY ANALYSIS RESULTS – NC 96 + PERRY CURTIS ROAD

APPENDIX G: CAPACITY ANALYSIS RESULTS – PERRY CURTIS ROAD + PERRY RIDGE COURT

APPENDIX H: CAPACITY ANALYSIS RESULTS – PERRY RIDGE COURT + RIDGE VALLEY WAY

APPENDIX I: CAPACITY ANALYSIS RESULTS – PERRY CURTIS ROAD / WAKE COUNTY LINE ROAD + CHAMBLEE ROAD

APPENDIX J: CAPACITY ANALYSIS RESULTS – NC 39 + WAKE COUNTY LINE ROAD

APPENDIX K: CAPACITY ANALYSIS RESULTS – NC 39 + OLD US 264

APPENDIX L: CAPACITY ANALYSIS RESULTS – CHAMBLEE ROAD + SITE DRIVE #1

APPENDIX M: CAPACITY ANALYSIS RESULTS – CHAMBLEE ROAD + SITE DRIVE #2

APPENDIX N: CAPACITY ANALYSIS RESULTS – CHAMBLEE ROAD + SITE DRIVE #3

APPENDIX O: SIMTRAFFIC REPORTS

APPENDIX P: TURN LANE WARRANTS

TRAFFIC IMPACT ANALYSIS

CHAMBLEE PROPERTY

Zebulon, NC

INTRODUCTION

The proposed residential development will be located along Chamblee Road north of Perry Curtis Road in Zebulon, North Carolina. Site access will be served via one (1) right-in/right-in driveway and two (2) full movement driveways along Chamblee Road as well as via connection to the existing Ridge Valley Way stubbed to the southern border of the property. The middle site driveway along Chamblee Road is proposed to be aligned across Chamblee Road, providing access to both sides of the development. The purpose of this Traffic Impact Analysis (TIA) is to determine the potential traffic impacts of this development and to identify transportation improvements that may be required to mitigate the impacts on the roadway network. The site is currently undeveloped and is expected to consist of the following land uses at full buildout:

- > 211 single family homes
- > 119 townhomes

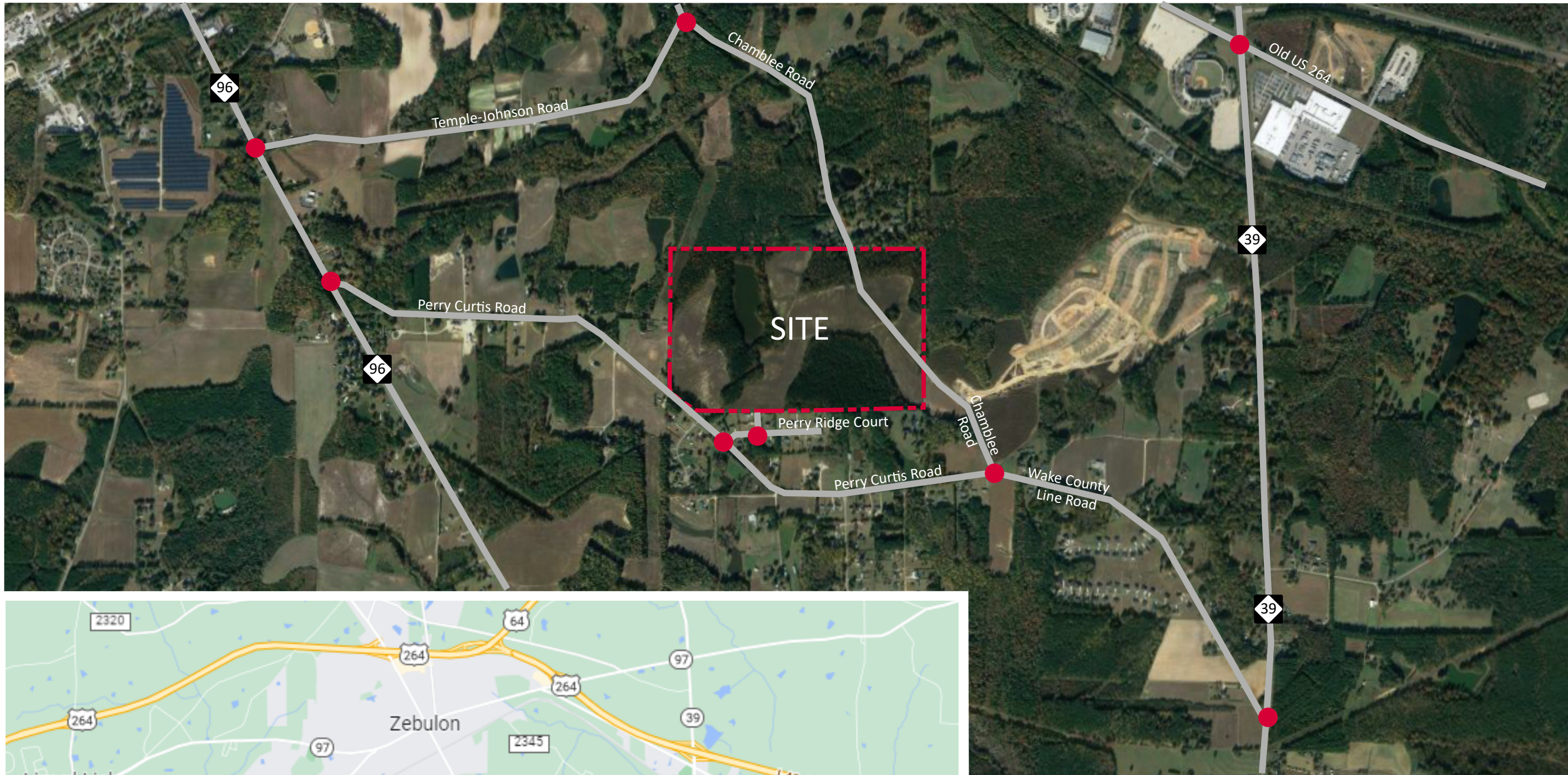
The proposed site is to be built-out by the year 2027. A Memorandum of Understanding (MOU) was reviewed and approved by the North Carolina Department of Transportation (NCDOT) and the Town of Zebulon (Town), outlining the TIA scope and assumptions. The MOU and approval correspondence is provided in Appendix A. Based on the approved scoping; the following intersections are included in this TIA study area:

- > Chamblee Road/ E. Horton Street and Temple-Johnson Road
- > NC 96 and Temple-Johnson Road
- > NC 96 and Perry Curtis Road
- > Perry Curtis Road and Perry Ridge Court
- > Perry Ridge Court and Ridge Valley Way
- > Perry Curtis Road / Wake County Line Road and Chamblee Road
- > NC 39 and Wake County Line Road
- > NC 39 and Old US 264
- > Chamblee Road and Site Drive #1
- > Chamblee Road and Site Drive #2
- > Chamblee Road and Site Drive #3

Refer to Figure 1 for a map of the study area. Figure 2 provides the most up to date preliminary site plan available at time of preparation of this study.

To determine the traffic impacts of the proposed development, the following analysis scenarios are included in this study:

- > Existing (2022) Traffic Conditions
- > No-Build (2027) Traffic Conditions
- > Build (2027) Traffic Conditions



- LEGEND**
- Study Intersection
 - Site Location



CHAMBLEE PROPERTY
ZEBULON, NC

Site Location Map



Figure 1

CHAMBLEE RD COMMUNITY CONCEPT PLAN

SITE DATA

Site Area	+/- 136 acres
Total Lots	+/- 350 lots
Proposed Single Family	+/- 271 lots
Proposed Townhomes	+/- 119 lots

CHAMBLEE RD

EX. POWER LINE EASEMENT



MINIMUM TYPE B (20') BUFFER

COLLECTOR STREET

PERRY CURTIS RD

MINIMUM TYPE B (20') BUFFER

PERRY RIDGE CT



EXISTING CONDITIONS

The proposed development is located in an area primarily consisting of residential development and undeveloped land. Figure 3 provides a graphical representation of the existing lane configuration, storage capacity, traffic control type, and intersection spacing within the study area. Roadway characteristics within the study area is shown in Table 1. Average Annual Daily Traffic (AADT) data is provided based on the most recent count data provided by NCDOT. This AADT data provides the average Vehicles Per Day (vpd) for the subject facility based on typical operations. This AADT data is provided for informational purposes only and is not utilized for capacity analysis calculations within this study.

Road Name	Route #	Maintained By	Typical Cross Section	Speed Limit	AADT (year of data)
NC 39		NCDOT	2-lane undivided	55 mph	8,500 vpd (2019)
NC 96		NCDOT	2-lane undivided	45 mph	5,600 vpd (2019)
Old US 264	US 264 ALT	NCDOT	2-lane undivided	55 mph	3,800 vpd (2017)
Perry Curtis Road	SR 2347	NCDOT	2-lane undivided	55 mph	1,300 vpd (2015)
Wake County Line Road	SR 1727	NCDOT	2-lane undivided	55 mph	970 vpd (2016)
Chamblee Road	SR 2345	NCDOT	2-lane undivided	35 mph	830 vpd (2022)*
Temple-Johnson Road	SR 2346	NCDOT	2-lane undivided	55 mph	220 vpd (2022)*
Perry Ridge Court	SR 5417	NCDOT	2-lane undivided	25 mph	100 vpd (2022)*
Ridge Valley Way	N/A	Public	2-lane undivided	25 mph	N/A**

*AADT determined based on Existing (2022) traffic volumes assuming that the weekday PM peak hour accounts for approximately 10% of the daily traffic on the roadway.

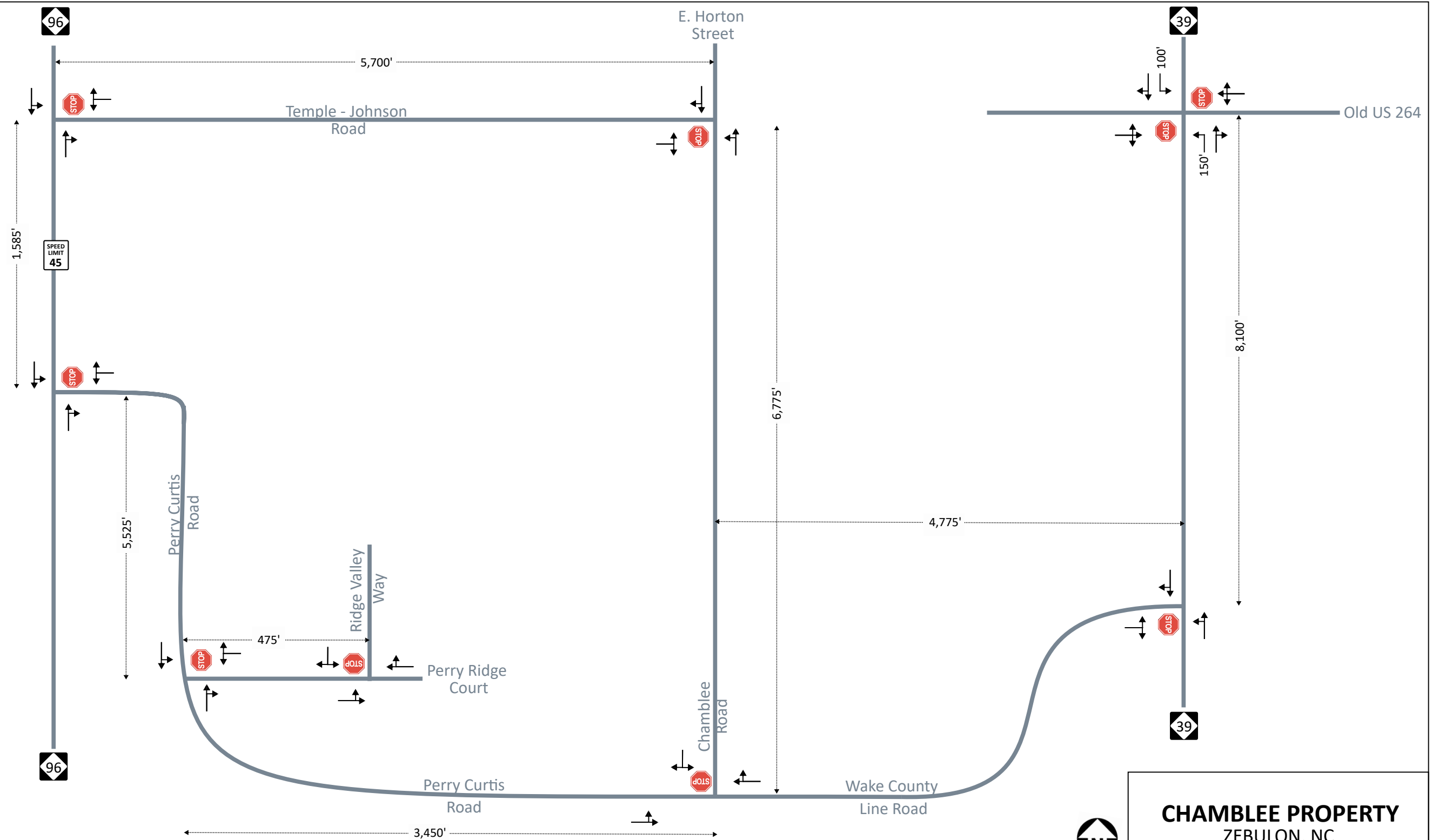
**No AADT data was available or could be determined based on the assumptions outlined in the MOU.

Existing peak hour turning movement counts were conducted in June and October 2022 during a typical weekday AM (7:00 – 9:00 AM) and weekday PM (4:00 – 6:00 PM) peak hours while local public schools were in session. This data was collected at the following existing study intersections:


- > Chamblee Road/ E. Horton Street and Temple-Johnson Road
- > NC 96 and Temple-Johnson Road
- > NC 96 and Perry Curtis Road
- > Perry Curtis Road and Perry Ridge Court
- > Perry Ridge Court and Ridge Valley Way
- > Perry Curtis Road / Wake County Line Road and Chamblee Road
- > NC 39 and Wake County Line Road
- > NC 39 and Old US 264
- > Chamblee Road and Site Drive #1
- > Chamblee Road and Site Drive #2
- > Chamblee Road and Site Drive #3

Peak hour traffic volumes were determined from these traffic counts and balanced between study intersections, where appropriate. Per the approved MOU, existing volumes at the intersection of Perry Ridge Court at Ridge Valley Way were pulled through from the adjacent intersection of Perry Curtis Road at Perry Ridge Court. Traffic count data is provided in Appendix B. Refer to Figure 4 for the Existing (2022) peak hour traffic volumes.

The Existing (2022) traffic volumes were analyzed utilizing the current lane configurations to determine existing operations for the study area.



LEGEND

-  Unsignalized Full Movement Intersection
- X' Turn Lane Storage Length
- ←-Y'-> Intersection Spacing

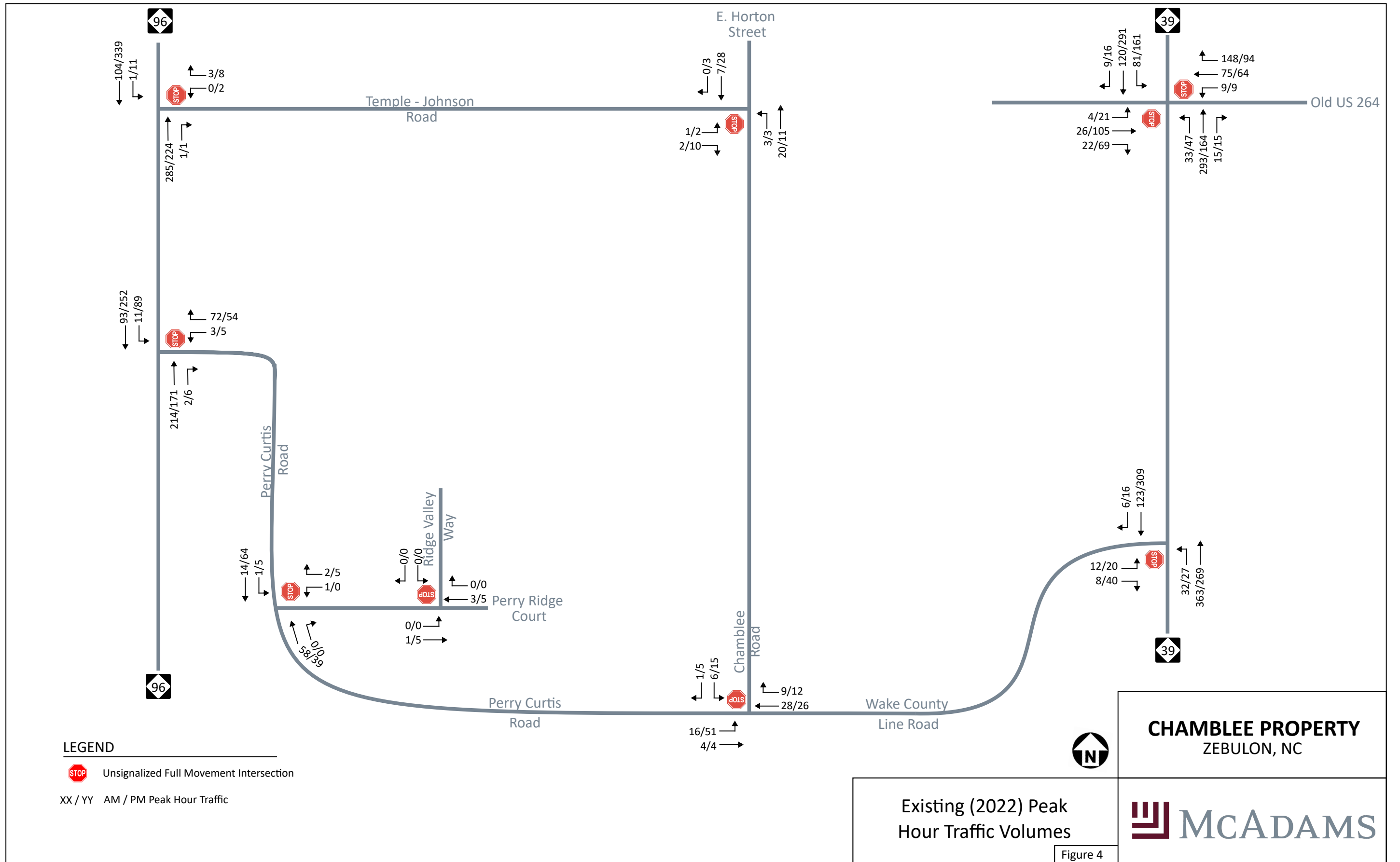


CHAMBLEE PROPERTY
ZEBULON, NC

Existing Lane
Configurations



Figure 3



NO-BUILD CONDITIONS

In order to account for background growth in the study area prior to the proposed developments buildout year of 2022, the existing traffic count volumes were grown at a set growth rate and nearby approved adjacent development traffic was added to the study area based on their approved TIA's. Per the approved MOU, the existing traffic counts were grown at a 3% annual growth rate to determine projected traffic volumes. Refer to Figure 5 for the Projected (2027) traffic volumes.

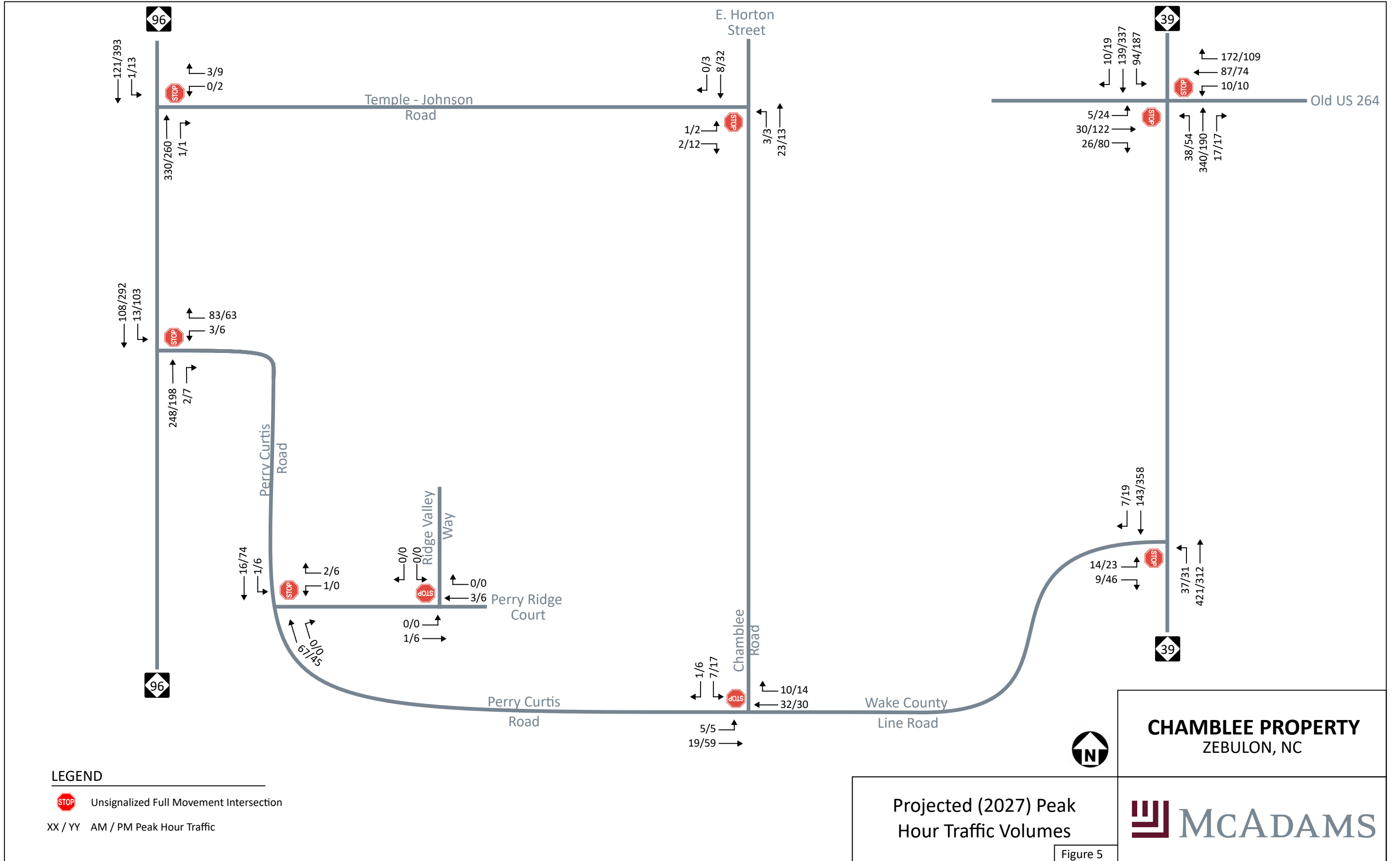
To account for the traffic volumes of the adjacent developments approved in the area, the traffic from those developments were also compiled and added to the analysis. The adjacent development traffic volumes are provided on Figure 6. Based on the approved MOU, the following development was included:

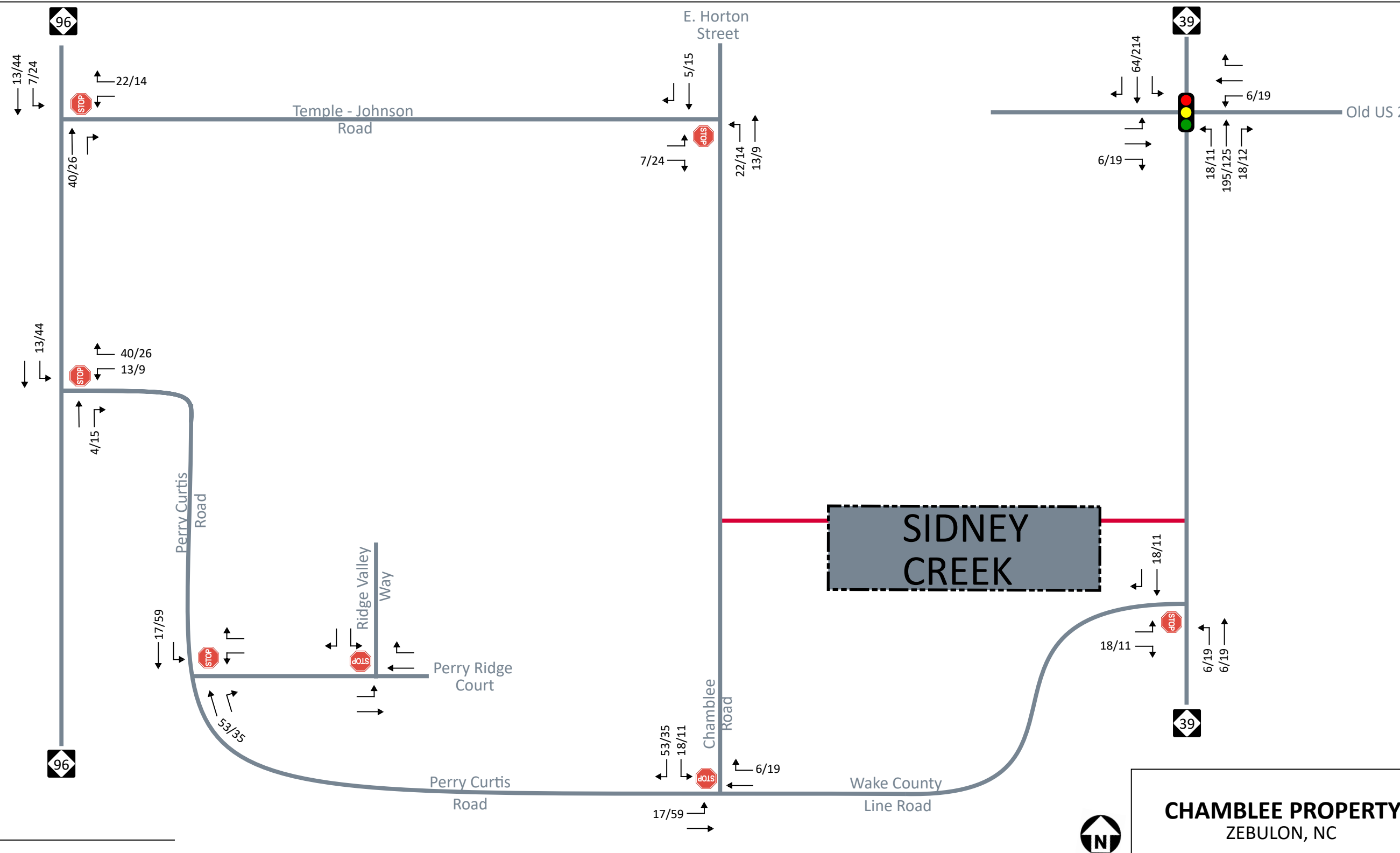
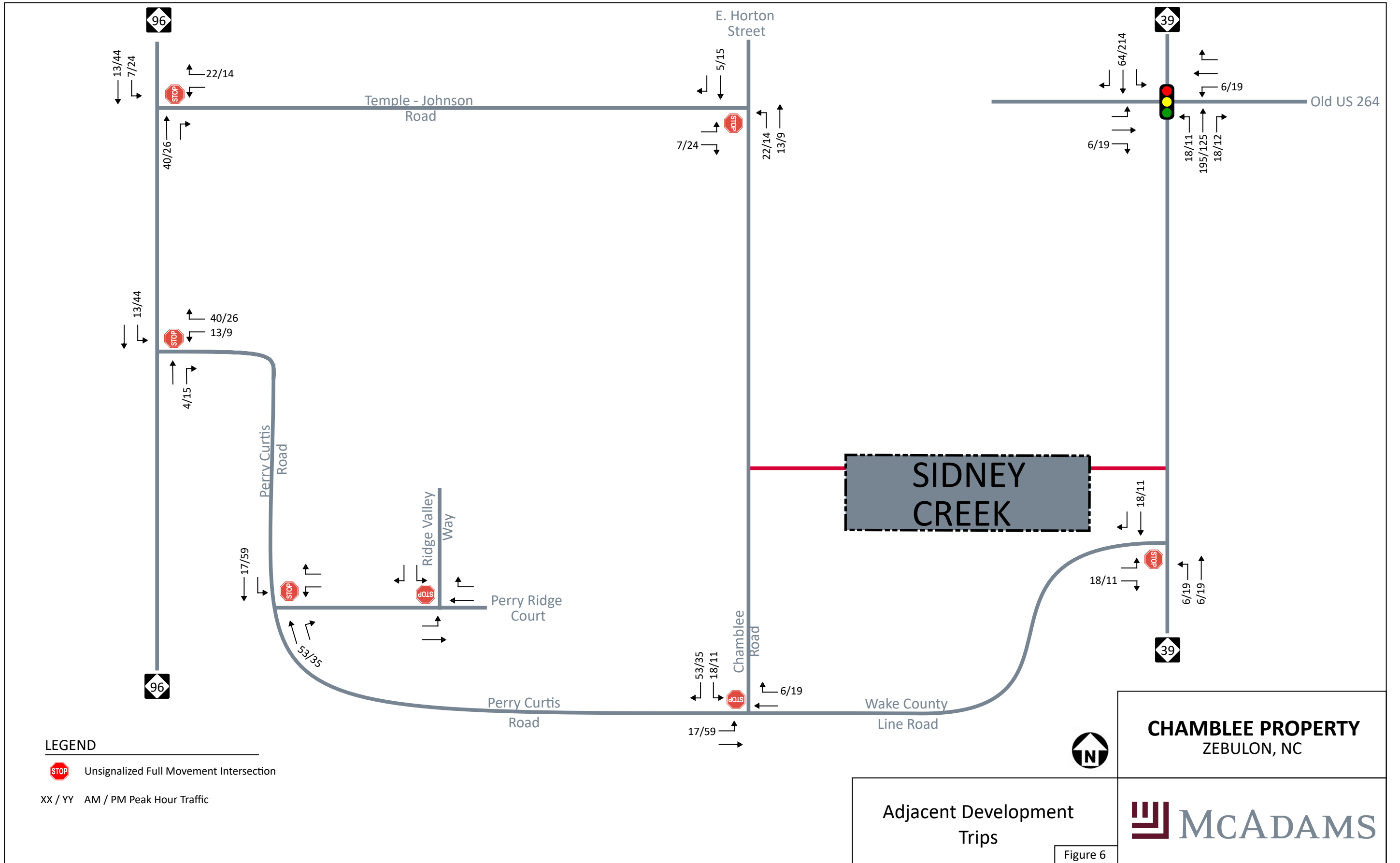
Development Name	Location	Land Use / Density	Build-out Year	Firm Completing TIA
Sidney Creek	West of NC 39 along Chamblee Road	565 single-family homes 140 townhomes	2029	RKA

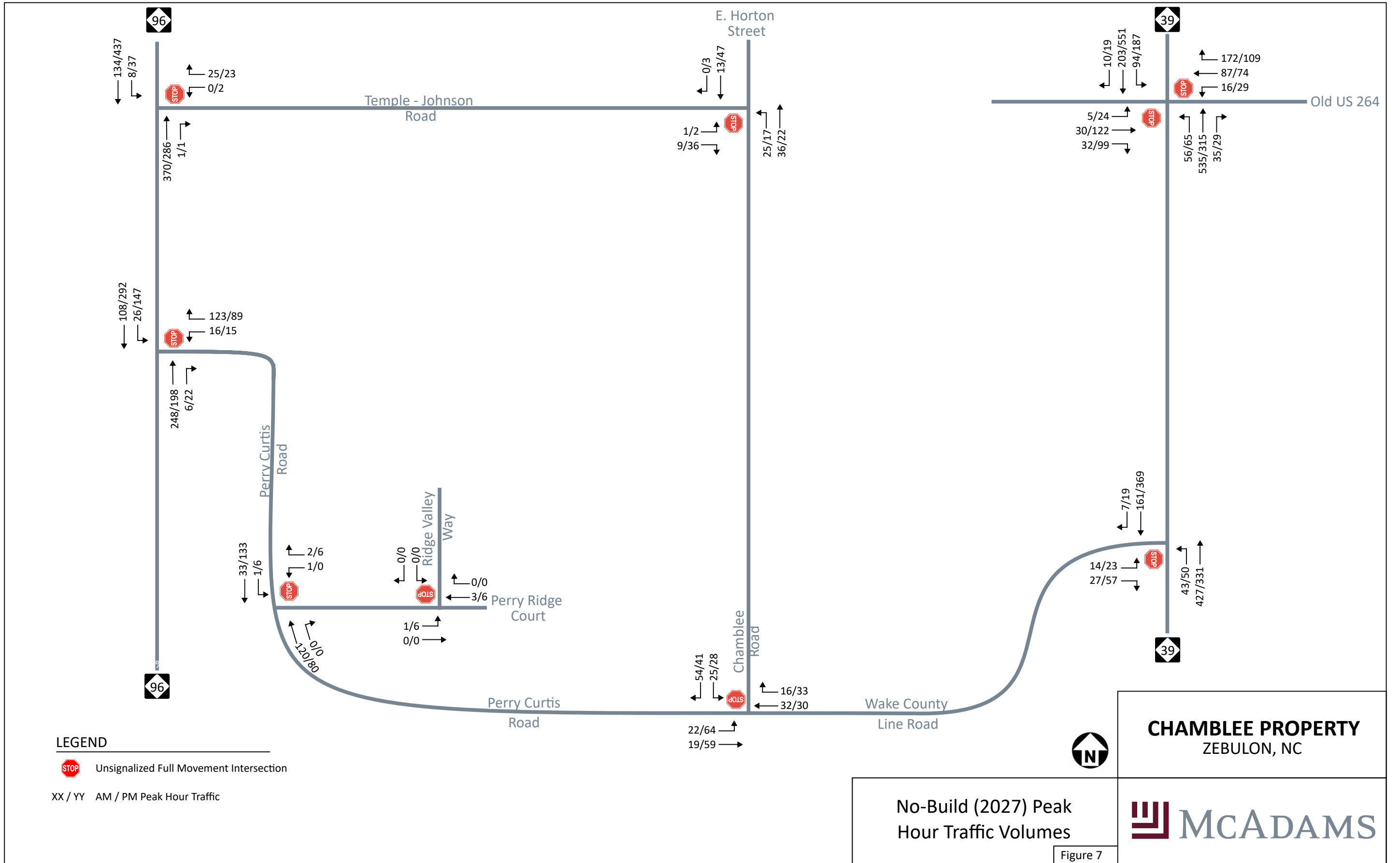
According to the Town and NCDOT, the following roadway improvements at the are expected at the intersection of NC 39 and Old US 264 by the Sidney Creek adjacent development:

- > Monitor for signalization and install once warranted and approved by NCDOT
- > Construct an exclusive eastbound right-turn lane on Old US 264 with a minimum of 100 feet of full width storage and appropriate deceleration and taper.
- > Construct an exclusive eastbound left-turn lane on Old US 264 with a minimum of 50 feet of full width storage and appropriate deceleration and taper.
- > Construct an exclusive westbound right-turn lane on Old US 264 with a minimum of 125 feet of full width storage and appropriate deceleration and taper.
- > Construct an exclusive westbound left-turn lane on Old US 264 with a minimum of 50 feet of full width storage and appropriate deceleration and taper.
- > Extend the existing southbound left-turn lane on NC 39 to provide a minimum of 100 feet of full width storage and appropriate deceleration and taper.

Appendix C provides a full summary of the adjacent developments included in this analysis. In order to account for future year analysis without the proposed development, the Projected (2027) traffic volumes were added to the adjacent development trips to determine the No-Build (2027) traffic volumes. Figure 7 provides the No-Build (2027) volumes.







BUILD CONDITIONS

The proposed development is expected to consist of 211 single-family homes and 119 townhomes. Based on the Institute for Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition, and the suggested method of trip calculations provided in NCDOT’s *Rate vs. Equation spreadsheet*, trips for the proposed development were calculated for weekday daily, weekday AM peak hour, and weekday PM peak hour. A summary of this trip generation is provided in Table 3.

TABLE 3: TRIP GENERATION

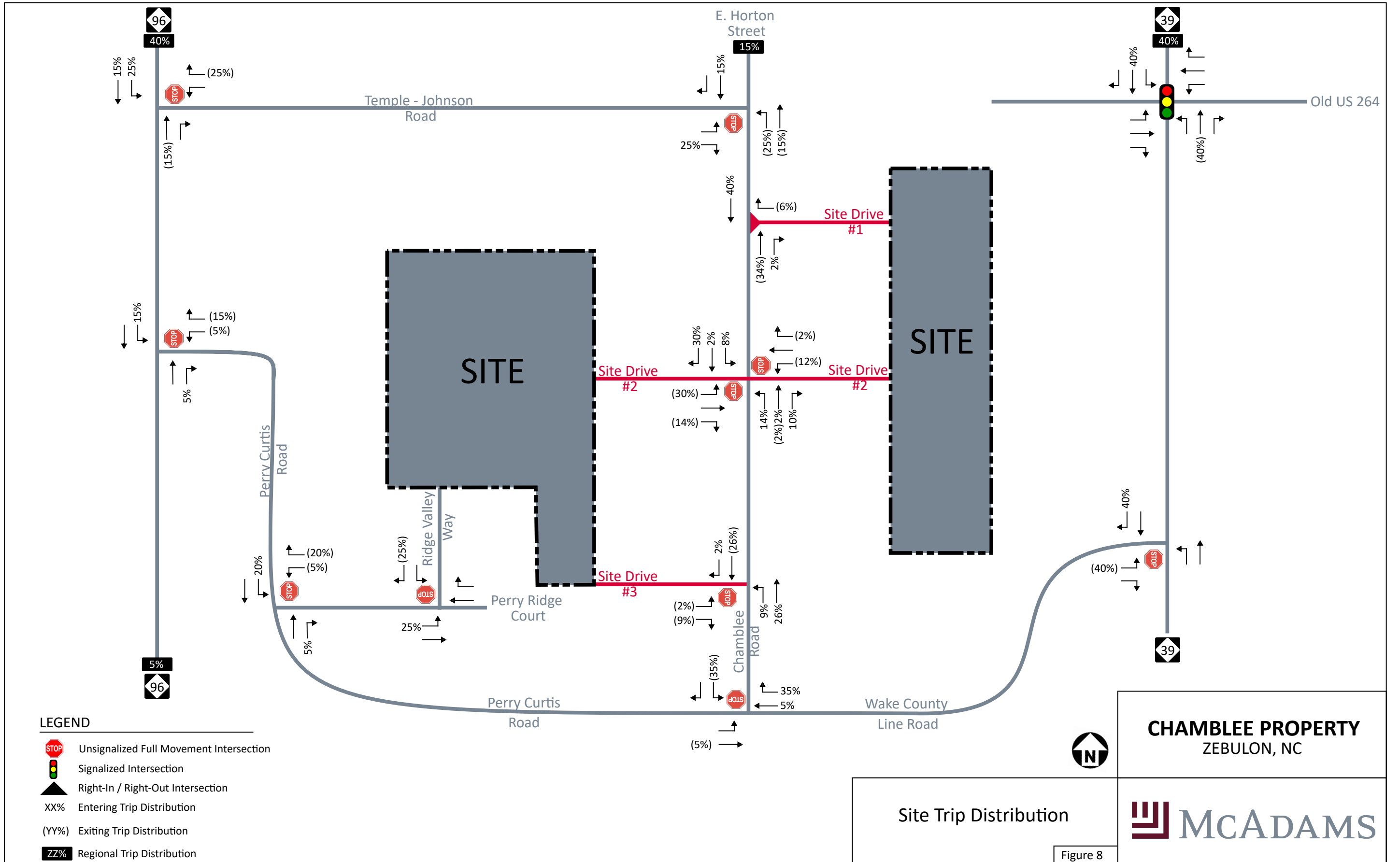
Land Use (ITE Code)	Density	Calculation Methodology	Daily Trips	AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Single-Family Detached Housing (210)	211 Units	Adjacent / Equation	2,006	38	109	147	126	74	200
Single-Family Attached Housing (215)	119 Units	Adjacent / Equation	856	17	39	56	38	29	67
Total			2,862	55	148	203	164	103	267

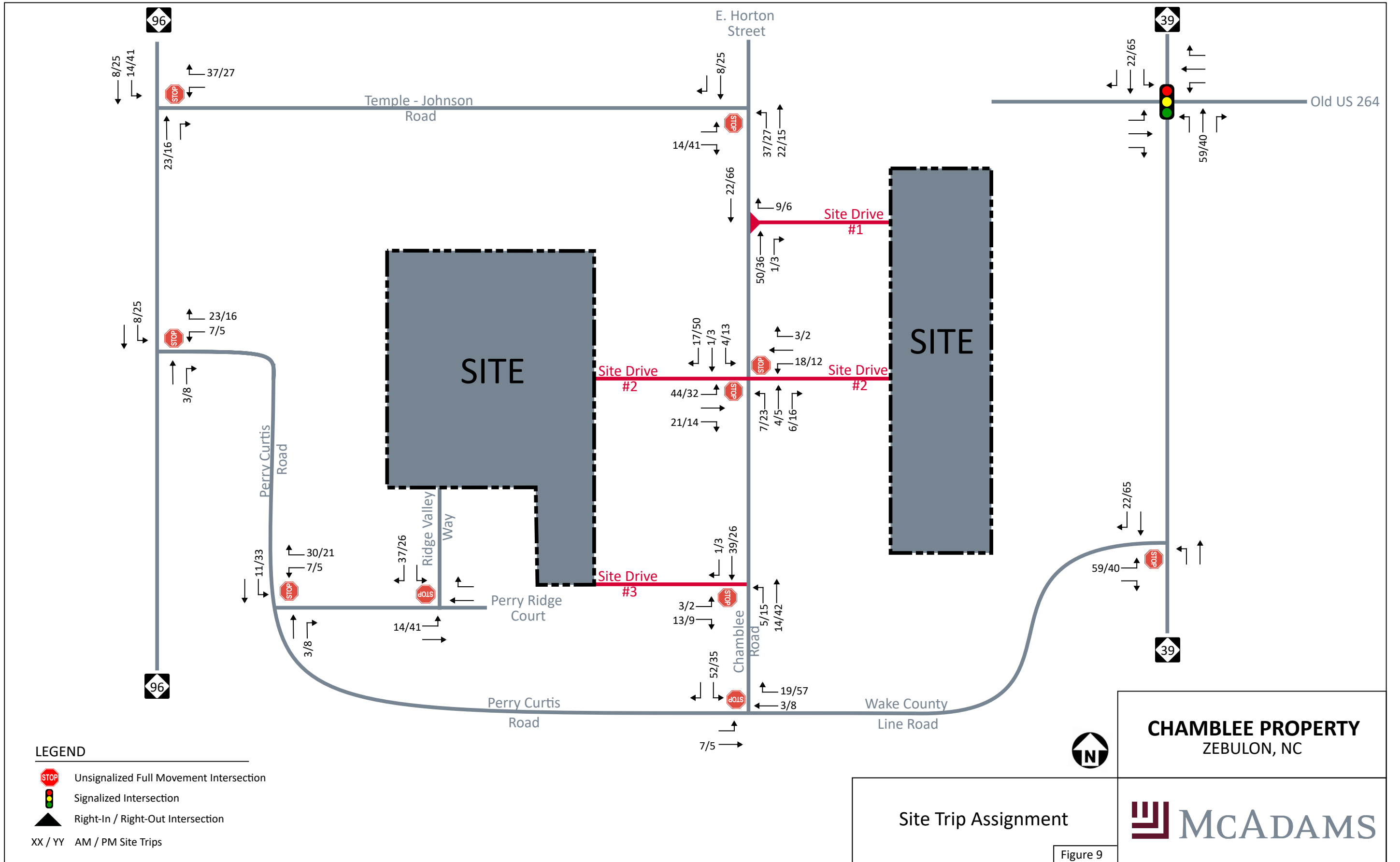
Based on the existing traffic patterns, population centers surrounding the development, and engineering judgment the site trips were distributed according to the regional distributions listed as follows:

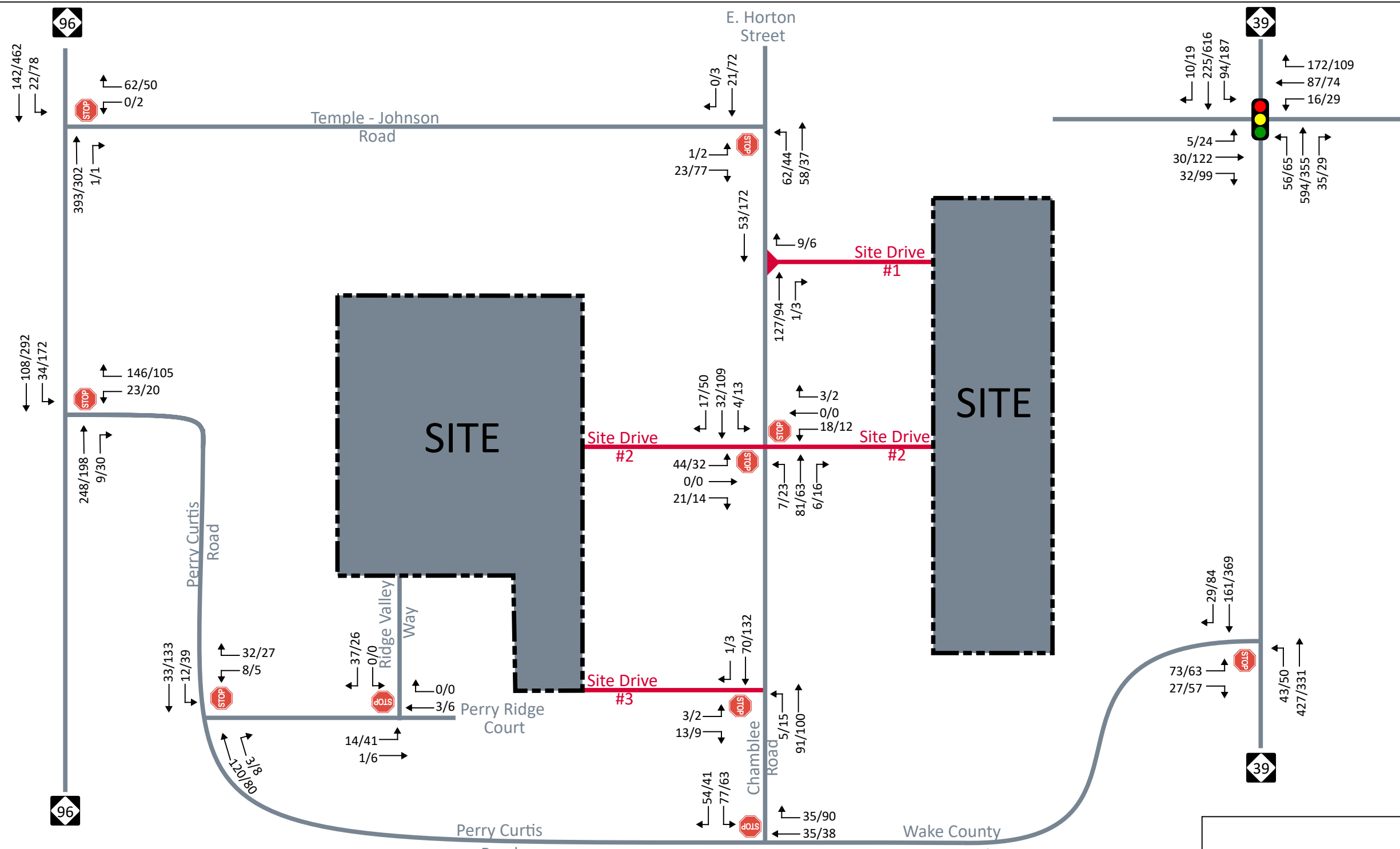
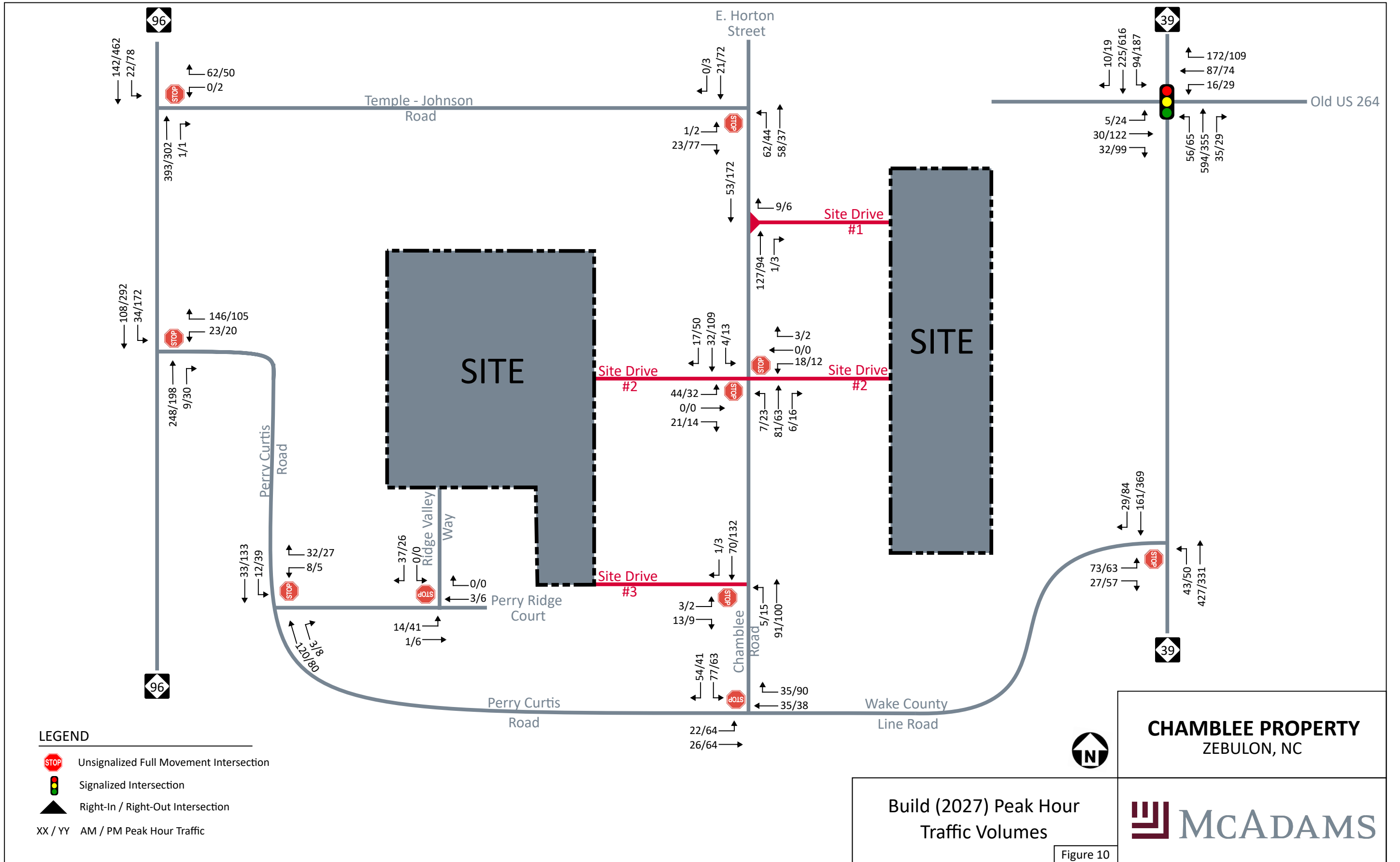
- > 40% to/from the north via NC 96
- > 40% to/from the north via NC 39
- > 15% to/from the south via Chamblee Road
- > 5% to/from the north via NC 96

Refer to Figure 8 for the detailed trip distribution percentages within the study area. The trip generation and distribution were approved by NCDOT and the Town within the MOU provided in Appendix A.

The trip distribution was applied to the trip generation to determine the trip assignment for the proposed development site trips at all study intersections. Refer to Figure 9 for the site trip assignment. To determine the future traffic volumes at the study intersections with buildout of the proposed site, the No-Build (2027) traffic volumes were added to the site trip assignment to determine Build (2027) traffic volumes. Refer to Figure 10 for the Build (2027) traffic volumes.







CAPACITY ANALYSIS

The intersections and analysis scenarios included in this study were analyzed to determine the potential impact by the proposed development and to recommend improvements to mitigate any potential impacts. The capacity analysis reviews the level of service (LOS), delay, and vehicle queues expected under each analysis scenario utilizing the methodology contained in the *Highway Capacity Manual (HCM)*, 6th Edition, published by the Transportation Research Board.

LOS is a qualitative measurement of traffic operations based on the average total vehicle delay of the movement, approach, or intersection. The HCM includes six levels of service, ranging from level “A” (free flow conditions) to level “F” (where over-saturated conditions are evident). Table 4 provides a summary of the thresholds for each LOS under both unsignalized (stop-control) and signalized operations.

TABLE 4: HIGHWAY CAPACITY MANUAL – LEVELS OF SERVICE + DELAY CRITERIA		
Level of Service (LOS)	Unsignalized	Signalized
	Average Control Delay (Seconds per vehicle)	Average Control Delay (Seconds per vehicle)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

A computer software package, Synchro (version 11.1), was utilized for the analysis of operations within this study. Within this software package, SimTraffic was also used to review queue lengths and the operations of intersections within the context of location and spacing in the study area. The capacity analysis summary table for each study intersection provides the delay and LOS for each approach and overall intersection, when appropriate. More detailed queues and delay information is provided in the appendix.

Per the NCDOT *Congestion Management Capacity Analysis Guidelines*, several assumptions were applied to the full study. A summary of these assumptions is provided below:

- > A Peak Hour Factor (PHF) of 0.90 was used for all analysis scenarios and intersections.
- > A heavy vehicle percentage of 2% was applied to all analysis scenarios and intersections.
- > For allowable movements with volumes less than four (4), a volume of four (4) was applied in the capacity analysis. In order to present accurate information within the traffic volume figures, this was not applied to those conditions.

CHAMBLEE ROAD / E. HORTON STREET + TEMPLE-JOHNSON ROAD

The intersection of Chamblee Road / E. Horton Street and Temple-Johnson Road is currently an unsignalized, three-leg intersection. This intersection was analyzed under Existing (2022), No-Build (2027), and Build (2027) conditions.

Table 5 provides the capacity analysis for the subject intersection with the lane configurations and traffic control shown in the table. Refer to Appendix D for the Synchro capacity analysis reports.

TABLE 5: CAPACITY ANALYSIS SUMMARY OF CHAMBLEE ROAD / E. HORTON STREET + TEMPLE-JOHNSON ROAD						
Conditions	A P P R O A C H	Lane Configurations	Weekday AM Peak Hour		Weekday PM Peak Hour	
			LOS and Approach Delay (seconds)	Overall Delay (seconds)	LOS and Approach Delay (seconds)	Overall Delay (seconds)
Existing (2022)	EB ² NB ¹ SB	1 LT-RT 1 LT-TH 1 TH-RT	A (9) A (7) --	N/A	A (9) A (7) --	N/A
No-Build (2027)	EB ² NB ¹ SB	1 LT-RT 1 LT-TH 1 TH-RT	A (9) A (7) --	N/A	A (9) A (7) --	N/A
Build (2027)	EB ² NB ¹ SB	1 LT-RT 1 LT-TH 1 TH-RT	A (9) A (7) --	N/A	A (9) A (8) --	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of Existing (2022), No-Build (2027), and Build (2027) conditions indicate that the intersection of Chamblee Road / E. Horton Street and Temple-Johnson Road is expected to operate at LOS A for both the major-street left-turn movement and minor-street approach during the weekday AM and PM peak hours.

NC 96 + TEMPLE-JOHNSON ROAD

The intersection of NC 96 and Temple-Johnson Road is currently an unsignalized, three-leg intersection. This intersection was analyzed under Existing (2022), No-Build (2027), and Build (2027) conditions.

Table 6 provides the capacity analysis for the subject intersection with the lane configurations and traffic control shown in the table. Refer to Appendix E for the Synchro capacity analysis reports.

TABLE 6: CAPACITY ANALYSIS SUMMARY OF NC 96 + TEMPLE-JOHNSON ROAD						
Conditions	A P P R O A C H	Lane Configurations	Weekday AM Peak Hour		Weekday PM Peak Hour	
			LOS and Approach Delay (seconds)	Overall Delay (seconds)	LOS and Approach Delay (seconds)	Overall Delay (seconds)
Existing (2022)	WB ²	1 LT-RT	B (11)	N/A	B (11)	N/A
	NB	1 TH-RT	--			
	SB ¹	1 LT-TH	A (8)			
No-Build (2027)	WB ²	1 LT-RT	B (11)	N/A	B (11)	N/A
	NB	1 TH-RT	--			
	SB ¹	1 LT-TH	A (8)			
Build (2027)	WB ²	1 LT-RT	B (12)	N/A	B (12)	N/A
	NB	1 TH-RT	--			
	SB ¹	1 LT-TH	A (8)			

1. Level of service for major-street left-turn movement.

2. Level of service for minor-street approach.

Capacity analysis of Existing (2022), No-Build (2027), and Build (2027) conditions indicate that the intersection of NC 96 and Temple-Johnson Road is expected to operate at LOS B or better for both the major-street left-turn movement and minor-street approach during the weekday AM and PM peak hours.

NC 96 + PERRY CURTIS ROAD

The intersection of NC 96 and Perry Curtis Road is currently an unsignalized, three-leg intersection. This intersection was analyzed under Existing (2022), No-Build (2027), and Build (2027) conditions.

Table 7 provides the capacity analysis for the subject intersection with the lane configurations and traffic control shown in the table. Refer to Appendix F for the Synchro capacity analysis reports.

TABLE 7: CAPACITY ANALYSIS SUMMARY OF NC 96 + PERRY CURTIS ROAD						
Conditions	A P P R O A C H	Lane Configurations	Weekday AM Peak Hour		Weekday PM Peak Hour	
			LOS and Approach Delay (seconds)	Overall Delay (seconds)	LOS and Approach Delay (seconds)	Overall Delay (seconds)
Existing (2022)	WB ²	1 LT-RT	B (10)	N/A	B (10)	N/A
	NB	1 TH-RT	--			
	SB ¹	1 LT-TH	A (8)			
No-Build (2027)	WB ²	1 LT-RT	B (11)	N/A	B (12)	N/A
	NB	1 TH-RT	--			
	SB ¹	1 LT-TH	A (8)			
Build (2027)	WB ²	1 LT-RT	B (12)	N/A	B (13)	N/A
	NB	1 TH-RT	--			
	SB ¹	1 LT-TH	A (8)			

1. Level of service for major-street left-turn movement.

2. Level of service for minor-street approach.

Capacity analysis of Existing (2022), No-Build (2027), and Build (2027) conditions indicate that the intersection of NC 96 and Perry Curtis Road is expected to operate at LOS B or better for both the major-street left-turn movement and minor-street approach during the weekday AM and PM peak hours.

PERRY CURTIS ROAD + PERRY RIDGE COURT

The intersection of Perry Curtis Road and Perry Ridge Court is currently an unsignalized, three-leg intersection. This intersection was analyzed under Existing (2022), No-Build (2027), and Build (2027) conditions.

Table 8 provides the capacity analysis for the subject intersection with the lane configurations and traffic control shown in the table. Refer to Appendix G for the Synchro capacity analysis reports.

TABLE 8: CAPACITY ANALYSIS SUMMARY OF PERRY CURTIS ROAD + PERRY RIDGE COURT						
Conditions	A P P R O A C H	Lane Configurations	Weekday AM Peak Hour		Weekday PM Peak Hour	
			LOS and Approach Delay (seconds)	Overall Delay (seconds)	LOS and Approach Delay (seconds)	Overall Delay (seconds)
Existing (2022)	WB ²	1 LT-RT	A (9)	N/A	A (9)	N/A
	NB	1 TH-RT	--		--	
	SB ¹	1 LT-TH	A (7)		A (7)	
No-Build (2027)	WB ²	1 LT-RT	A (9)	N/A	A (9)	N/A
	NB	1 TH-RT	--		--	
	SB ¹	1 LT-TH	A (8)		A (7)	
Build (2027)	WB ²	1 LT-RT	A (9)	N/A	A (9)	N/A
	NB	1 TH-RT	--		--	
	SB ¹	1 LT-TH	A (8)		A (8)	

1. Level of service for major-street left-turn movement.

2. Level of service for minor-street approach.

Capacity analysis of Existing (2022), No-Build (2027), and Build (2027) conditions indicate that the intersection of Perry Curtis Road and Perry Ridge Court is expected to operate at LOS A for both the major-street left-turn movement and minor-street approach during the weekday AM and PM peak hours.

This intersection was analyzed with the assumption that site trips from the proposed development may utilize this roadway for access in order to present a conservative analysis. With this assumption, the proposed development is expected to have a negligible impact in delay on the subject intersection.

PERRY RIDGE COURT + RIDGE VALLEY WAY

The intersection of Perry Ridge Court and Ridge Valley Way is currently an unsignalized, three-leg intersection. This intersection was analyzed under Existing (2022), No-Build (2027), and Build (2027) conditions.

Table 9 provides the capacity analysis for the subject intersection with the lane configurations and traffic control shown in the table. Refer to Appendix H for the Synchro capacity analysis reports.

TABLE 9: CAPACITY ANALYSIS SUMMARY OF PERRY RIDGE COURT + RIDGE VALLEY WAY						
Conditions	A P P R O A C H	Lane Configurations	Weekday AM Peak Hour		Weekday PM Peak Hour	
			LOS and Approach Delay (seconds)	Overall Delay (seconds)	LOS and Approach Delay (seconds)	Overall Delay (seconds)
Existing (2022)	EB ¹	1 LT-TH	A (7)	N/A	A (7)	N/A
	WB	1 TH-RT	--		--	
	SB ²	1 LT-RT	A (9)		A (9)	
No-Build (2027)	EB ¹	1 LT-TH	A (7)	N/A	A (7)	N/A
	WB	1 TH-RT	--		--	
	SB ²	1 LT-RT	A (9)		A (9)	
Build (2027)	EB ¹	1 LT-TH	A (7)	N/A	A (7)	N/A
	WB	1 TH-RT	--		--	
	SB ²	1 LT-RT	A (9)		A (9)	

1. Level of service for major-street left-turn movement.

2. Level of service for minor-street approach.

Capacity analysis of Existing (2022), No-Build (2027), and Build (2027) conditions indicate that the intersection of Perry Ridge Court and Ridge Valley Way is expected to operate at LOS A for both the major-street left-turn movement and minor-street approach during the weekday AM and PM peak hours.

Ridge Valley Way is currently stubbed to the property line for future connection. As such, this intersection was analyzed with the assumption that site trips from the proposed development may utilize this roadway for access in order to present a conservative analysis. With this assumption, the proposed development is expected to have a negligible impact in delay on the subject intersection.

PERRY CURTIS ROAD / WAKE COUNTY LINE ROAD + CHAMBLEE ROAD

The intersection of Perry Curtis Road / Wake County Line Road and Chamblee Road is currently an unsignalized, three-leg intersection. This intersection was analyzed under Existing (2022), No-Build (2027), and Build (2027) conditions.

Table 10 provides the capacity analysis for the subject intersection with the lane configurations and traffic control shown in the table. Refer to Appendix I for the Synchro capacity analysis reports.

TABLE 10: CAPACITY ANALYSIS SUMMARY OF PERRY CURTIS ROAD / WAKE COUNTY LINE ROAD + CHAMBLEE ROAD						
Conditions	A P P R O A C H	Lane Configurations	Weekday AM Peak Hour		Weekday PM Peak Hour	
			LOS and Approach Delay (seconds)	Overall Delay (seconds)	LOS and Approach Delay (seconds)	Overall Delay (seconds)
Existing (2022)	EB ¹	1 LT-TH	A (7)	N/A	A (7)	N/A
	WB	1 TH-RT	--			
	SB ²	1 LT-RT	A (9)			
No-Build (2027)	EB ¹	1 LT-TH	A (7)	N/A	A (8)	N/A
	WB	1 TH-RT	--			
	SB ²	1 LT-RT	A (9)			
Build (2027)	EB ¹	1 LT-TH	A (7)	N/A	A (8)	N/A
	WB	1 TH-RT	--			
	SB ²	1 LT-RT	A (10)			

1. Level of service for major-street left-turn movement.

2. Level of service for minor-street approach.

Capacity analysis of Existing (2022), No-Build (2027), and Build (2027) conditions indicate that the intersection of Perry Curtis Road / Wake County Line Road and Chamblee Road is expected to operate at LOS B or better for both the major-street left-turn movement and minor-street approach during the weekday AM and PM peak hours.

NC 39 + WAKE COUNTY LINE ROAD

The intersection of NC 39 and Wake County Line Road is currently an unsignalized, three-leg intersection. This intersection was analyzed under Existing (2022), No-Build (2027), and Build (2027) conditions.

Table 11 provides the capacity analysis for the subject intersection with the lane configurations and traffic control shown in the table. Refer to Appendix J for the Synchro capacity analysis reports.

TABLE 11: CAPACITY ANALYSIS SUMMARY OF NC 39 + WAKE COUNTY LINE ROAD						
Conditions	A P P R O A C H	Lane Configurations	Weekday AM Peak Hour		Weekday PM Peak Hour	
			LOS and Approach Delay (seconds)	Overall Delay (seconds)	LOS and Approach Delay (seconds)	Overall Delay (seconds)
Existing (2022)	EB ² NB ¹ SB	1 LT-TH 1 LT-TH 1 TH-RT	B (12) A (8) --	N/A	B (13) A (8) --	N/A
No-Build (2027)	EB ² NB ¹ SB	1 LT-TH 1 LT-TH 1 TH-RT	B (12) A (8) --	N/A	B (14) A (8) --	N/A
Build (2027)	EB ² NB ¹ SB	1 LT-TH 1 LT-TH 1 TH-RT	C (17) A (8) --	N/A	C (20) A (9) --	N/A

1. Level of service for major-street left-turn movement.
 2. Level of service for minor-street approach.

Capacity analysis of Existing (2022), No-Build (2027), and Build (2027) conditions indicate that the intersection of NC 39 and Wake County Line Road is expected to operate at LOS C or better for both the major-street left-turn movement and minor-street approach during the weekday AM and PM peak hours.

NC 39 + OLD US 264

The intersection of NC 39 and Old US 264 is currently an unsignalized, four-leg intersection. This intersection was analyzed under Existing (2022), No-Build (2027), and Build (2027) conditions. Based on coordination with Town and NCDOT staff, Sidney Creek is expected to construct improvements at the subject intersection prior to the 2027 buildout of the proposed development. These improvements were included under all future year analyses (No-Build and Build conditions). The improvements included as adjacent development improvements are:

- > Monitor for signalization and install once warranted and approved by NCDOT.
- > Construct an exclusive eastbound right-turn lane on Old US 264 with a minimum of 100 feet of full width storage and appropriate deceleration and taper.
- > Construct an exclusive eastbound left-turn lane on Old US 264 with a minimum of 50 feet of full width storage and appropriate deceleration and taper.
- > Construct an exclusive westbound right-turn lane on Old US 264 with a minimum of 125 feet of full width storage and appropriate deceleration and taper.
- > Construct an exclusive westbound left-turn lane on Old US 264 with a minimum of 50 feet of full width storage and appropriate deceleration and taper.
- > Extend the existing southbound left-turn lane on NC 39 to provide a minimum of 100 feet of full width storage and appropriate deceleration and taper.

Table 12 provides the capacity analysis for the subject intersection with the lane configurations and traffic control shown in the table. Refer to Appendix K for the Synchro capacity analysis reports.

TABLE 12: CAPACITY ANALYSIS SUMMARY OF NC 39 + OLD US 264						
Conditions	APPROACH	Lane Configurations	Weekday AM Peak Hour		Weekday PM Peak Hour	
			LOS and Approach Delay (seconds)	Overall Delay (seconds)	LOS and Approach Delay (seconds)	Overall Delay (seconds)
Existing (2022)	EB ²	1 LT-TH-RT	C (16)	N/A	F (76)	N/A
	WB ²	1 LT-TH-RT	C (21)		D (32)	
	NB ¹	1 LT, 1 TH-RT	A (8)		A (8)	
	SB ¹	1 LT, 1 TH-RT	A (8)		A (8)	
No-Build (2027)	EB	<u>1 LT, 1 TH, 1 RT</u>	D (38)	C (30)	D (43)	C (33)
	WB	<u>1 LT, 1 TH, 1 RT</u>	D (38)		D (40)	
	NB	1 LT, 1 TH-RT	C (29)		C (32)	
	SB	1 LT, 1 TH-RT	C (25)		C (29)	
Build (2027)	EB	<u>1 LT, 1 TH, 1 RT</u>	D (39)	C (31)	D (46)	D (35)
	WB	<u>1 LT, 1 TH, 1 RT</u>	D (40)		D (46)	
	NB	1 LT, 1 TH-RT	C (30)		C (33)	
	SB	1 LT, 1 TH-RT	C (25)		C (30)	

Background Improvements by Sidney Creek are shown underlined.

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of Existing (2022) conditions indicate that the intersection of NC 39 and Old US 264 currently operates at LOS A for the major-street left-turn movement and at LOS D or better for the minor-street approach during the weekday AM and PM peak hour, with the exception of the eastbound approach (LOS F) during the PM peak hour.

Under future 2027 conditions, the Sidney Creek adjacent development is expected to install a traffic signal in addition to constructing geometric improvements at this intersection. Capacity analysis of No-Build (2027) and Build (2027) conditions indicates that this intersection is expected to operate at an overall LOS C during both the weekday AM and PM peak hours. Additionally, all approaches are expected to operate at LOS D or better during the weekday AM and PM peak hours.

The proposed development is expected to account for less than 7% of the total trips at the intersection during the weekday AM and PM peak hours under Build (2027) conditions. It should also be noted that the subject intersection is approximately 3 miles from the proposed site's property line. Due to the expected acceptable operation of this intersection upon buildout of the proposed development, no improvements are recommended by the development.

CHAMBLEE ROAD + SITE DRIVE #1

The future intersection of Chamblee Road and Site Drive #1 is expected to operate as an unsignalized, three-leg, right turn in/right turn out intersection. This intersection was analyzed under Build (2027) conditions.

Table 13 provides the capacity analysis for the subject intersection with the lane configurations and traffic control shown in the table. Refer to Appendix L for the Synchro capacity analysis reports.

TABLE 13: CAPACITY ANALYSIS SUMMARY OF CHAMBLEE ROAD + SITE DRIVE #1						
Conditions	A P P R O A C H	Lane Configurations	Weekday AM Peak Hour		Weekday PM Peak Hour	
			LOS and Approach Delay (seconds)	Overall Delay (seconds)	LOS and Approach Delay (seconds)	Overall Delay (seconds)
Build (2027)	WB¹	1 RT	A (9)	N/A	A (9)	N/A
	NB	1 TH-RT	--			
	SB	1 TH	--			

Improvements recommended by the Developer are shown in **bold**.

1. Level of service for minor-street approach.

Capacity analysis of Build (2027) conditions indicates that the intersection of Chamblee Road and Site Drive #1 is expected to operate at LOS A for the minor-street approach during the weekday AM and PM peak hours.

An exclusive northbound right-turn lane was considered at this intersection based on the methodology outlined in the Policy on Street and Driveway Access to North Carolina Highways (published by the NCDOT). Based on the findings from the turn lane warrant analysis, the intersection does not meet the criteria to warrant an exclusive turn lane. Additionally, Chamblee Road is expected to have an AADT of less than 4,000 vpd upon buildout year 2027, which is the typical threshold for considering designated turn lanes at unsignalized intersections; therefore, no exclusive turn lanes are recommended at the site drive. Appendix P provides the Turn Lane Warrant analysis.

CHAMBLEE ROAD + SITE DRIVE #2

The future intersection of Chamblee Road and Site Drive #2 is expected to operate as an unsignalized, four-leg intersection. This intersection was analyzed under Build (2027) conditions.

Table 14 provides the capacity analysis for the subject intersection with the lane configurations and traffic control shown in the table. Refer to Appendix M for the Synchro capacity analysis reports.

TABLE 14: CAPACITY ANALYSIS SUMMARY OF CHAMBLEE ROAD + SITE DRIVE #2						
Conditions	A P P R O A C H	Lane Configurations	Weekday AM Peak Hour		Weekday PM Peak Hour	
			LOS and Approach Delay (seconds)	Overall Delay (seconds)	LOS and Approach Delay (seconds)	Overall Delay (seconds)
Build (2027)	EB² WB² NB ¹ SB ¹	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A (9) A (10) A (7) A (7)	N/A	B (10) B (10) A (8) A (7)	N/A

Improvements recommended by the Developer are shown in **bold**.

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of Build (2027) conditions indicates that the intersection of Chamblee Road and Site Drive #2 is expected to operate at LOS B or better for the major-street left-turn movements and minor-street approaches during the weekday AM and PM peak hours.

An exclusive northbound right-turn lane was considered at this intersection based on the methodology outlined in the Policy on Street and Driveway Access to North Carolina Highways (published by the NCDOT). Based on the findings from the turn lane warrant analysis, the intersection does not meet the criteria to warrant an exclusive turn lane. Additionally, Chamblee Road is expected to have an AADT of less than 4,000 vpd upon buildout year 2027, which is the typical threshold for considering designated turn lanes at unsignalized intersections; therefore, no exclusive turn lanes are recommended at the site drive. Appendix P provides the Turn Lane Warrant analysis.

CHAMBLEE ROAD + SITE DRIVE #3

The future intersection of Chamblee Road and Site Drive #3 is expected to operate as an unsignalized, three-leg intersection. This intersection was analyzed under Build (2027) conditions.

Table 15 provides the capacity analysis for the subject intersection with the lane configurations and traffic control shown in the table. Refer to Appendix N for the Synchro capacity analysis reports.

TABLE 15: CAPACITY ANALYSIS SUMMARY OF CHAMBLEE ROAD + SITE DRIVE #3						
Conditions	A P P R O A C H	Lane Configurations	Weekday AM Peak Hour		Weekday PM Peak Hour	
			LOS and Approach Delay (seconds)	Overall Delay (seconds)	LOS and Approach Delay (seconds)	Overall Delay (seconds)
Build (2027)	EB² NB ¹ SB	1 LT-RT 1 LT-TH 1 TH-RT	A (9) A (7) --	N/A	A (9) A (8) --	N/A

Improvements recommended by the Developer are shown in **bold**.

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of Build (2027) conditions indicates that the intersection of Chamblee Road and Site Drive #3 is expected to operate at LOS A for the major-street left-turn movement and minor-street approach during the weekday AM and PM peak hours.

An exclusive northbound right-turn lane was considered at this intersection based on the methodology outlined in the Policy on Street and Driveway Access to North Carolina Highways (published by the NCDOT). Based on the findings from the turn lane warrant analysis, the intersection does not meet the criteria to warrant an exclusive turn lane. Additionally, Chamblee Road is expected to have an AADT of less than 4,000 vpd upon buildout year 2027, which is the typical threshold for considering designated turn lanes at unsignalized intersections; therefore, no exclusive turn lanes are recommended at the site drive. Appendix P provides the Turn Lane Warrant analysis.

CONCLUSION / RECOMMENDATIONS

The purpose of this Traffic Impact Analysis is to determine the potential traffic impacts of this development and to identify transportation improvements that may be required to mitigate the impacts on the roadway network. The proposed residential development will be located along Chamblee Road, north of Perry Curtis Road in Zebulon, NC. Site access will be served via one (1) right-in/right-out driveway and two (2) full movement driveways on Chamblee Road as well as via a connection to the existing Ridge Valley Way which is stubbed to the southern border of the property. The site is currently undeveloped and is expected to consist of a maximum of 211 single family homes and 199 townhomes and is expected to be built-out by the year 2027.

Based on the approved scoping, the following intersections were included in this TIA study area:

- > Chamblee Road/ E. Horton Street and Temple-Johnson Road
- > NC 96 and Temple-Johnson Road
- > NC 96 and Perry Curtis Road
- > Perry Curtis Road and Perry Ridge Court
- > Perry Ridge Court and Ridge Valley Way
- > Perry Curtis Road / Wake County Line Road and Chamblee Road
- > NC 39 and Wake County Line Road
- > NC 39 and Old US 264
- > Chamblee Road and Site Drive #1
- > Chamblee Road and Site Drive #2
- > Chamblee Road and Site Drive #3

Capacity analysis was conducted at all study intersections according to NCDOT and Town guidelines utilizing the methodology contained in the Institute of Transportation Engineers (ITE) *Highway Capacity Manual*. Based on review of adjacent development and background information provided by NCDOT and the Town, the following improvements have been identified or are recommended to accommodate future traffic conditions. Figure 11 provides a graphical representation of recommended improvements at the study intersections.

Improvements by Sidney Creek

NC 39 and Old US 264

- > Monitor for signalization and install once warranted and approved by NCDOT.
- > Construct an exclusive eastbound right-turn lane on Old US 264 with a minimum of 100 feet of full width storage and appropriate deceleration and taper.
- > Construct an exclusive eastbound left-turn lane on Old US 264 with a minimum of 50 feet of full width storage and appropriate deceleration and taper.
- > Construct an exclusive westbound right-turn lane on Old US 264 with a minimum of 125 feet of full width storage and appropriate deceleration and taper.
- > Construct an exclusive westbound left-turn lane on Old US 264 with a minimum of 50 feet of full width storage and appropriate deceleration and taper.
- > Extend the existing southbound left-turn lane on NC 39 to provide a minimum of 100 feet of full width storage and appropriate deceleration and taper.

Recommended Improvements by Developer

Chamblee Road and Site Drive #1

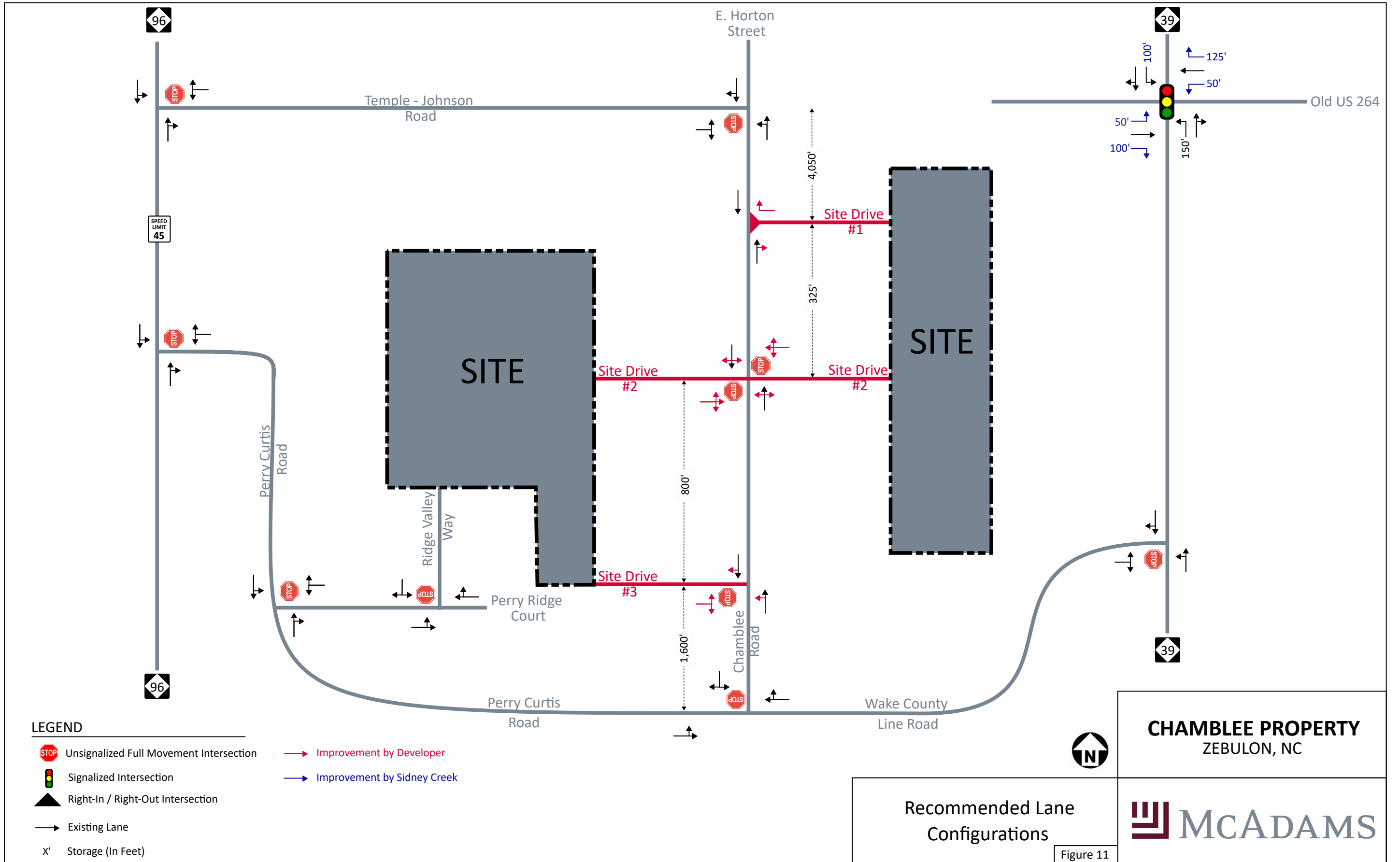
- > Construct Site Drive #1 as the westbound approach with one (1) ingress lane and one (1) egress lane.
 - o Note: This intersection will be restricted to right-in/right-out operations.
- > Provide stop control on the westbound approach of the site drive.

Chamblee Road and Site Drive #2

- > Construct Site Drive #2 with a full movement eastbound and westbound approach with one (1) ingress lane and one (1) egress lane each, respectively.
- > Provide stop control on the eastbound and westbound approaches of the site drives.

Chamblee Road and Site Drive #3

- > Construct Site Drive #3 as a full movement eastbound approach with one (1) ingress lane and one (1) egress lane.
- > Provide stop control on the eastbound approach of the site drive.



APPENDIX

*APPENDIX A: MEMORANDUM OF UNDERSTANDING
(MOU)*

October 12, 2022

Michael J. Clark, AICP, CZO
Town of Zebulon
1003 North Arendell Avenue
Zebulon, NC 27597
919.823.1808

RE: Chamblee Property – Zebulon, NC – Traffic Impact Analysis

Dear Mr. Clark,

MEMORANDUM OF UNDERSTANDING

This letter provides a Memorandum of Understanding (MOU) outlining the proposed scope and assumptions related to the Traffic Impact Analysis (TIA) for the proposed Chamblee Property development, to be located along Chamblee Road, north of Perry Curtis Road in Zebulon, North Carolina. A preliminary site plan is attached. The following TIA scope is based on preliminary scoping email coordination with the Town of Zebulon (Town) and the North Carolina Department of Transportation (NCDOT) and a scoping meeting held on 9/27/2022 with Town and NCDOT staff.

The proposed development is anticipated to be completed in 2027 and is expected to include the following uses:

- > 211 Single family homes
- > 119 townhomes

The proposed development is expected to be served by one (1) right-in/right-out driveway on Chamblee Road, three (3) full movement driveways on Chamblee Road (two on the western side of Chamblee Road and one on the eastern side) and connection to the existing Ridge Valley Way stubbed to the properties southern border.

STUDY AREA

Based on coordination with NCDOT and Town staff, the study area consists of the following intersections:

- > Temple-Johnson Road at NC 96
- > Perry Curtis Road at NC 96
- > Chamblee Road at Temple-Johnson Road
- > Perry Curtis Road at Perry Ridge Court
- > Perry Ridge Court at Ridge Valley Way
- > Perry Curtis Road / Wake County Line Road at Chamblee Road
- > Wake County Line Road at NC 39
- > NC 39 at Old US 264

EXISTING TRAFFIC VOLUMES

Peak hour turning movement counts will be conducted during weekday AM (7:00 to 9:00 AM) and weekday PM (4:00 to 6:00 PM) peak hours in June and October 2022 at the existing study intersections while local public schools are in session. The existing volumes at the intersection of Perry Ridge Court at Ridge Valley Way will be pulled through from the adjacent intersection of Perry Curtis Road at Perry Ridge Court.

Traffic volumes will be balanced between study intersections, where appropriate.

NO-BUILD TRAFFIC VOLUMES

No-Build (2027) traffic volumes are proposed to be determined by projecting existing (2022) traffic volumes to the buildout year (2027) using a 3% annually compounded growth rate, as determined based on coordination with the Town.

Based on coordination with the Town and NCDOT, the Sidney Creek Residential development will be included as an adjacent development according to the 2019 Traffic Impact Analysis

TRIP GENERATION

Based on the Institute for Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition, and the suggested method of trip calculations provided in NCDOT's *Rate vs. Equation spreadsheet*, trips for the proposed development were calculated for weekday daily, weekday AM peak hour, and weekday PM peak hour. Refer to Table 1 for the trip generation for the proposed development.

Land Use (ITE Code)	Density	Calculation Methodology	Daily Trips	AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Single-Family Detached Housing (210)	211 units	Adjacent / Equation	2,006	38	109	147	126	74	200
Single-Family Attached Housing (215)	119 units	Adjacent / Equation	856	17	39	56	38	29	67
Total Trips			2,862	55	148	203	164	103	267

TRIP DISTRIBUTION / ASSIGNMENT

The primary site trip distribution was determined based on the locations of existing traffic patterns, population centers adjacent to the study area, and engineering judgment. A summary of the regional residential distributions is below:

- > 40% to/from the north via NC 96
- > 40% to/from the north via NC 39
- > 15% to/from the north via Chamblee Road
- > 5% to/from the south via NC 96

To account for the traffic of the proposed development, the trip generation will be applied to the trip distribution and added to the no-build traffic volumes to determine build conditions. Refer to the attached figure for the trip distributions at the study intersections.

ANALYSIS SCENARIOS

Study intersections will be analyzed during the weekday AM and PM peak hours under the following traffic scenarios:

- > Existing (2022) Conditions
- > No-Build (2027) Conditions
- > Build (2027) Conditions

STUDY DOCUMENT

All capacity analysis will be performed utilizing Synchro (Version 11.1). The traffic study report will be prepared based on Town and NCDOT requirements and will be summarized in a letter format.

If you find this memorandum of understanding acceptable, please let me know so that we may include it in the attachments. If you should have any questions or comments, please feel free to contact me at 919.287.0741.

Sincerely,

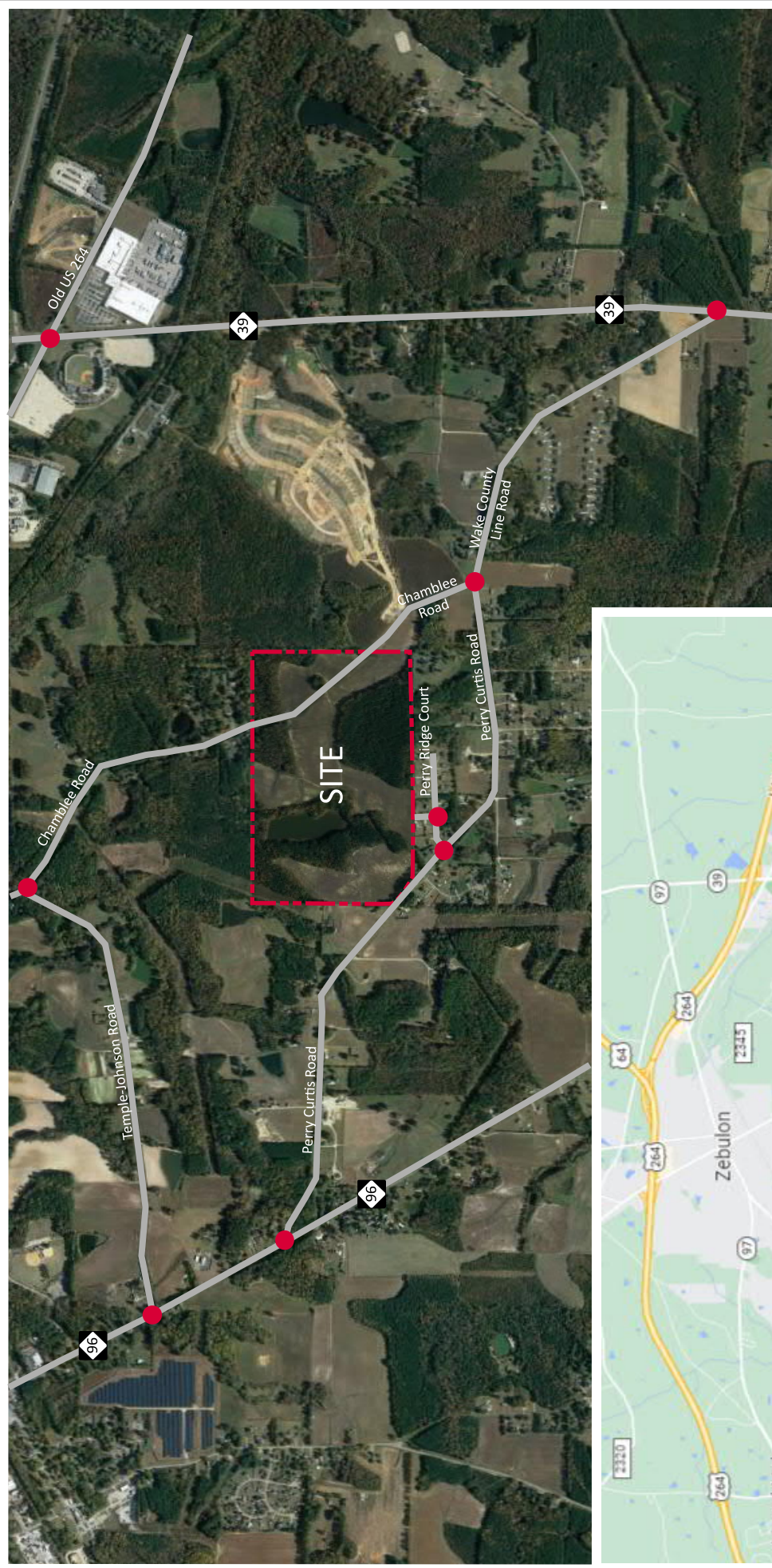
MCADAMS



Nate Bouquin, PE, PTOE
Traffic Engineering Lead, Transportation

Attachments: Preliminary Site Plan
Site Trip Distribution Figure

CC: Jeremy Warren, NCDOT
Matthew Nolfo, NCDOT
Clarence Bunting, NCDOT
Aaron Chalker, Town of Zebulon



CHAMBLEE PROPERTY
ZEBULON, NC



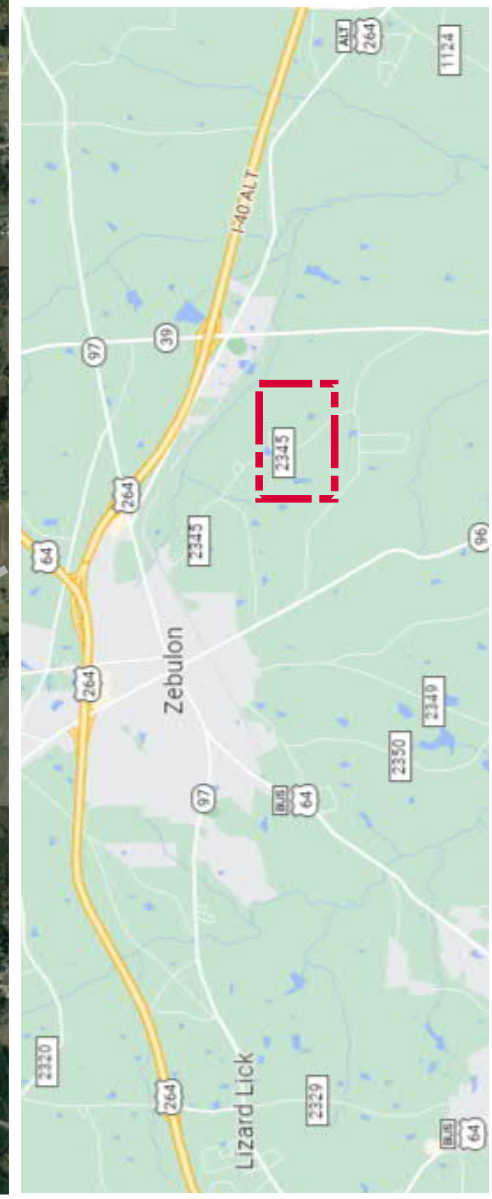
LEGEND

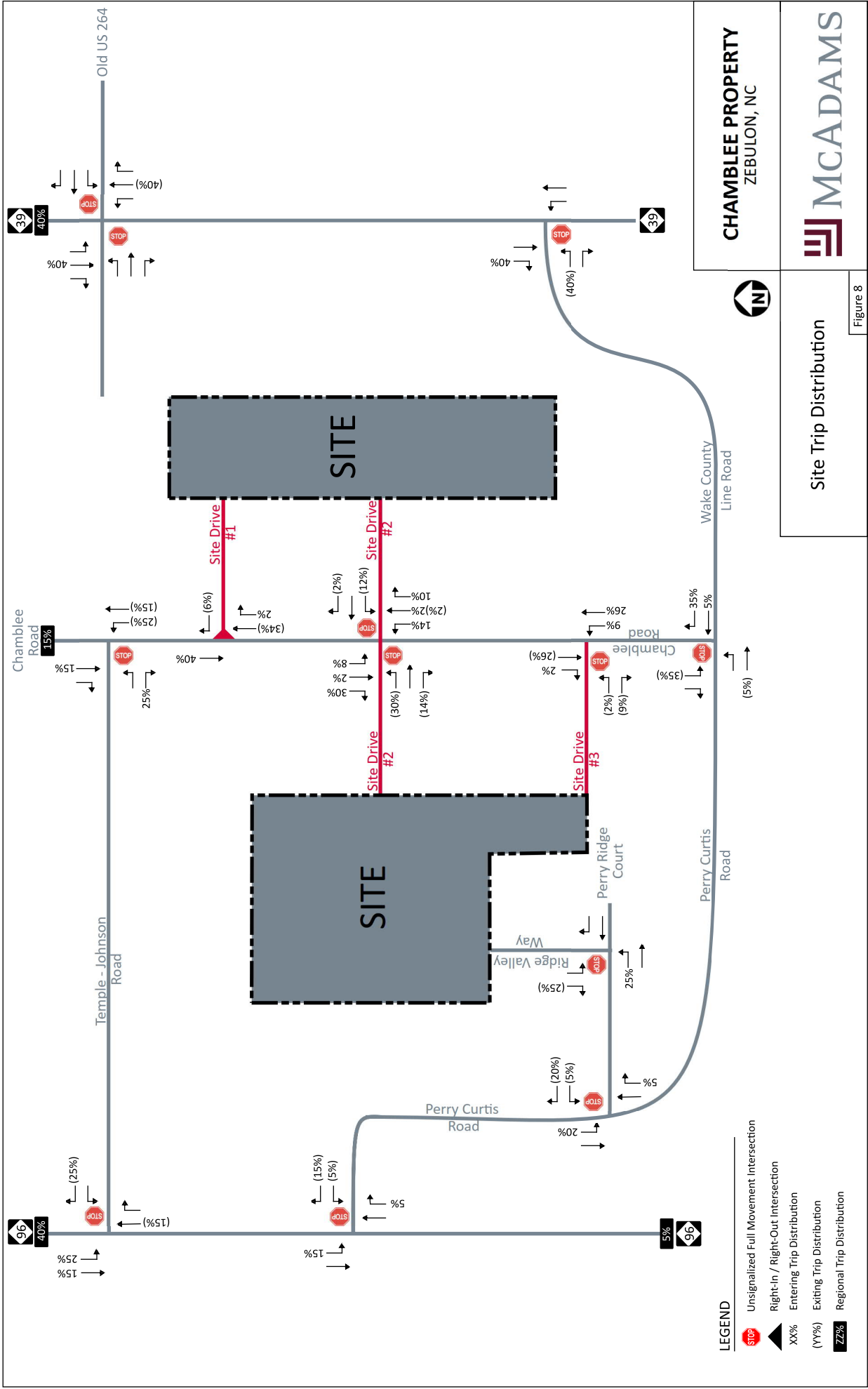
- Study Intersection
- Site Location



Site Location Map

Figure 1





Thanks!



Nate Bouquin PE PTOE
traffic engineering lead, transportation

direct 919.287.0741 mobile 919.961.4065
bouquin@mcadamsco.com
621 Hillsborough Street, Suite 500, Raleigh, NC 27603

www.mcadamsco.com
[Join Our Team](#)



**Our Raleigh office has moved! We can't wait to see you there soon.*

From: Warren, Jeremy L <jlwarren@ncdot.gov>
Sent: Monday, October 17, 2022 3:02 PM
To: Nate Bouquin <bouquin@mcadamsco.com>; Aaron Chalker <achalker@townofzebulon.org>; Michael Clark <mclark@townofzebulon.org>; Nolfo, Matthew J <mjnoflo@ncdot.gov>
Cc: Bunting, Clarence B <cbunting@ncdot.gov>; Lineberger, Nicholas C <nclineberger@ncdot.gov>; Tyler Huggins <huggins@mcadamsco.com>
Subject: RE: [External] Chamblee Rd Residential - TIA Scoping

CAUTION: This email is NOT from McAdams. DO NOT click links or open attachments unless you verify the sender and content.

The Department has no comments for the MOU.

Jeremy Warren, P.E.

District Engineer
Division 5, District 1
North Carolina Department of Transportation

919 814 6115 office **NEW**
jlwarren@ncdot.gov

4009 District Drive
Raleigh, NC 27607



Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Nate Bouquin <bouquin@mcadamsco.com>
Sent: Wednesday, October 12, 2022 3:13 PM
To: Aaron Chalker <achalker@townofzebulon.org>; Michael Clark <mclark@townofzebulon.org>; Warren, Jeremy L <jlwarren@ncdot.gov>; Nolfo, Matthew J <mjnoflo@ncdot.gov>
Cc: Bunting, Clarence B <cbunting@ncdot.gov>; Lineberger, Nicholas C <nclineberger@ncdot.gov>; Tyler Huggins <huggins@mcadamsco.com>
Subject: RE: [External] Chamblee Rd Residential - TIA Scoping

Tyler Huggins

From: Michael Clark <mclark@townofzebulon.org>
Sent: Monday, October 24, 2022 3:51 PM
To: Nate Bouquin; Aaron Chalker
Cc: Tyler Huggins
Subject: RE: [External] Chamblee Rd Residential - TIA Scoping

You don't often get email from mclark@townofzebulon.org. [Learn why this is important](#)

CAUTION: This email is NOT from McAdams. DO NOT click links or open attachments unless you verify the sender and content.

Good Afternoon,

The Town is good with these assumptions.

Thank you,
Mike

Michael J. Clark, AICP, CZO
Planning Director
Town of Zebulon

(919) 823-1808 (direct)

1003 North Arendell Avenue
Zebulon, N.C. 27597



www.townofzebulon.org

Email correspondence to and from this sender is subject to N.C. Public Records Law and may be disclosed to third parties.

From: Nate Bouquin <bouquin@mcadamsco.com>
Sent: Monday, October 24, 2022 9:42 AM
To: Aaron Chalker <achalker@townofzebulon.org>; Michael Clark <mclark@townofzebulon.org>
Cc: Tyler Huggins <huggins@mcadamsco.com>
Subject: RE: [External] Chamblee Rd Residential - TIA Scoping

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

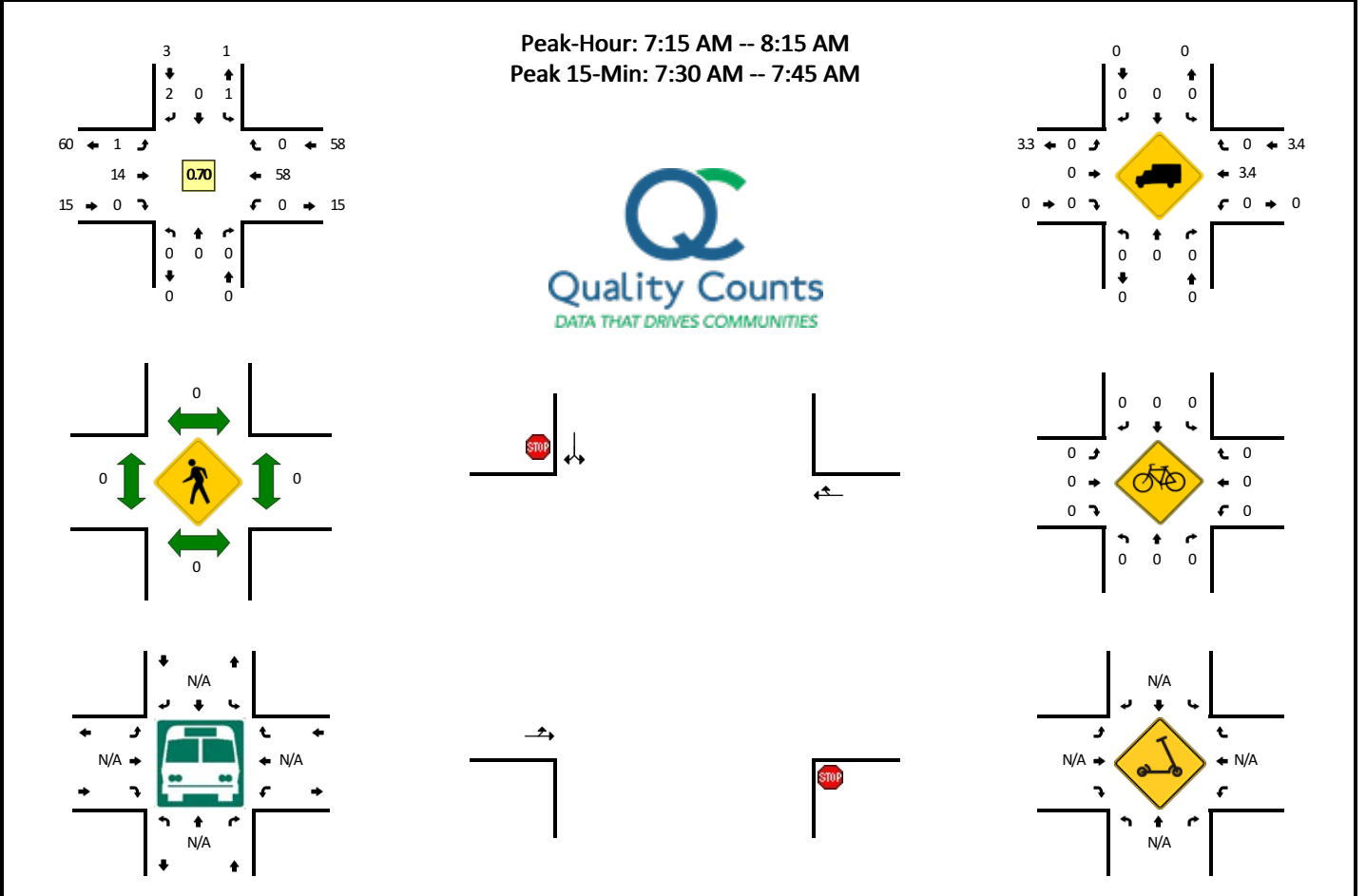
Michael / Aaron,

Does the Town have any additional comments on this MOU or are we clear to proceed with these assumptions?

APPENDIX B: COUNT DATA

LOCATION: Perry Ridge Ct -- Perry Curtis Rd
CITY/STATE: Zebulon, NC

QC JOB #: 15971101
DATE: Wed, Oct 5 2022

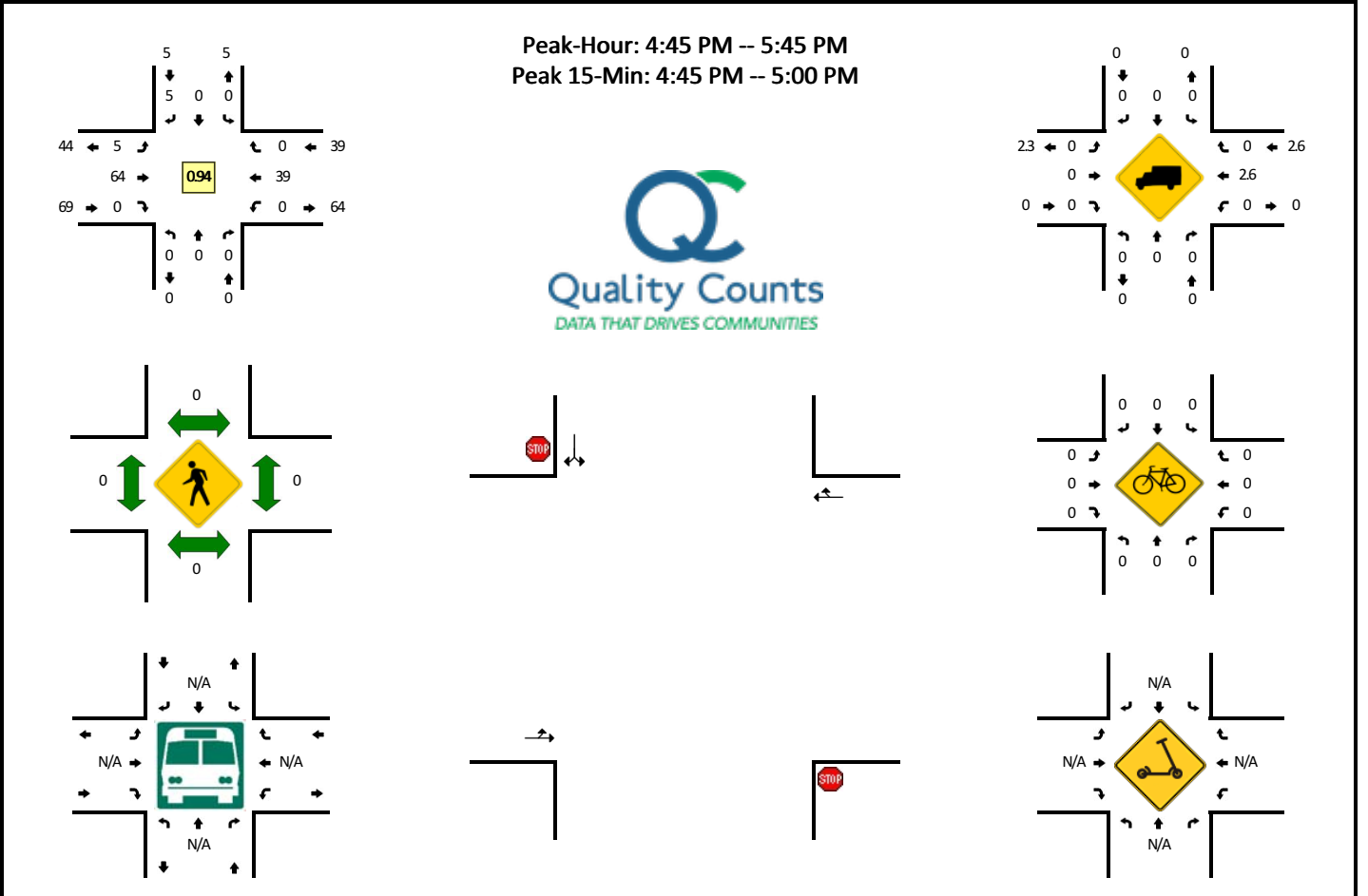


15-Min Count Period Beginning At	Perry Ridge Ct (Northbound)				Perry Ridge Ct (Southbound)				Perry Curtis Rd (Eastbound)				Perry Curtis Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	9	0	0	11	
7:15 AM	0	0	0	0	1	0	0	0	0	2	0	0	0	15	0	0	18	
7:30 AM	0	0	0	0	0	0	1	0	0	3	0	0	0	23	0	0	27	
7:45 AM	0	0	0	0	0	0	1	0	0	2	0	0	0	11	0	0	14	70
8:00 AM	0	0	0	0	0	0	0	0	1	7	0	0	0	9	0	0	17	76
8:15 AM	0	0	0	0	0	0	2	0	0	3	0	0	0	11	0	0	16	74
8:30 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	7	0	0	11	58
8:45 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	11	0	0	18	62
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	0	0	4	0	0	12	0	0	0	92	0	0	108	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: Perry Ridge Ct -- Perry Curtis Rd
CITY/STATE: Zebulon, NC

QC JOB #: 15971102
DATE: Wed, Oct 5 2022

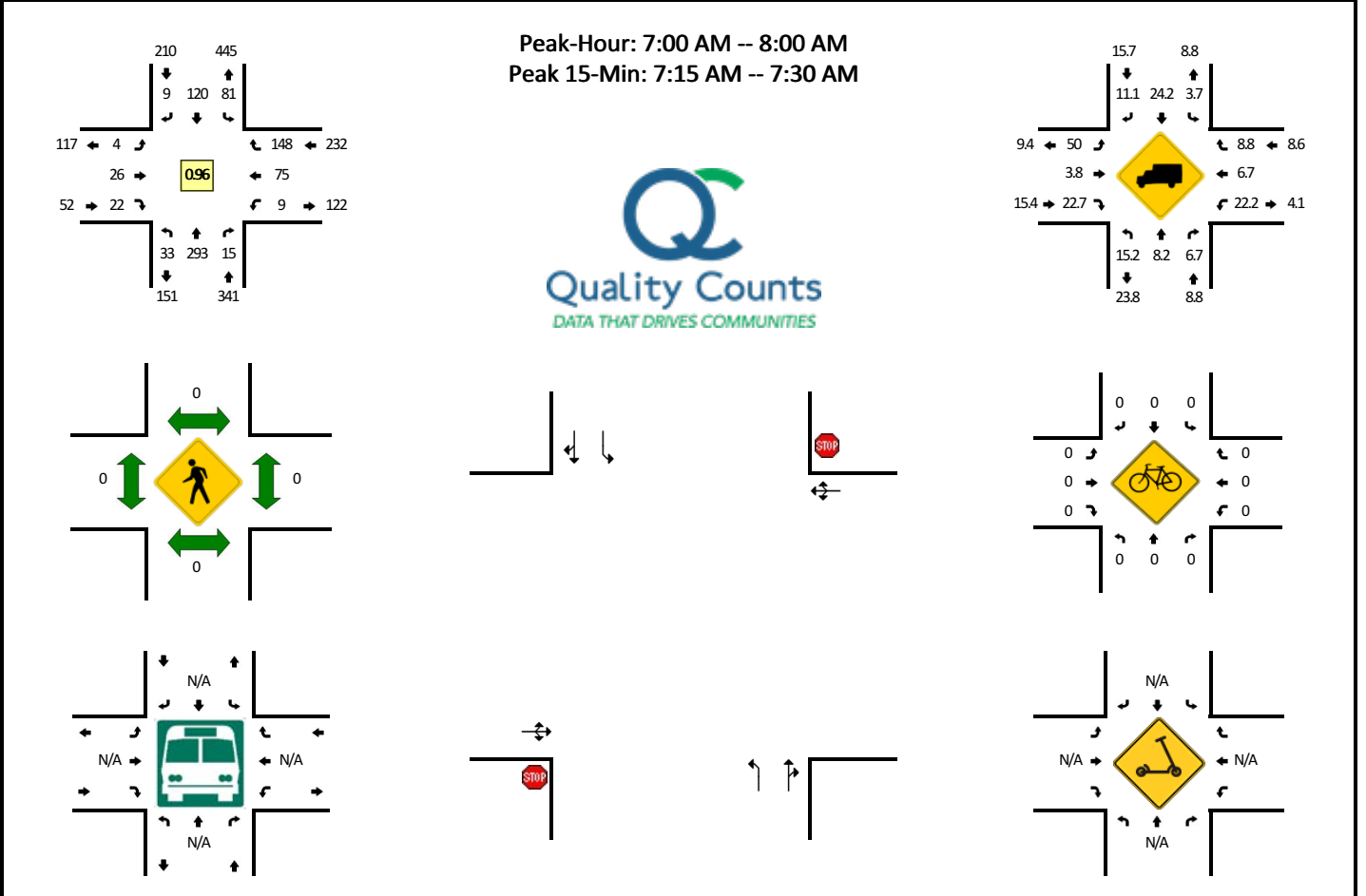


15-Min Count Period Beginning At	Perry Ridge Ct (Northbound)				Perry Ridge Ct (Southbound)				Perry Curtis Rd (Eastbound)				Perry Curtis Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	0	20	0	0	0	6	0	0	26	
4:15 PM	0	0	0	0	0	0	2	0	4	8	0	0	0	9	0	0	23	
4:30 PM	0	0	0	0	0	0	0	0	2	11	0	0	0	3	1	0	17	
4:45 PM	0	0	0	0	0	0	2	0	2	17	0	0	0	9	0	0	30	96
5:00 PM	0	0	0	0	0	0	1	0	1	14	0	0	0	8	0	0	24	94
5:15 PM	0	0	0	0	0	0	1	0	1	17	0	0	0	11	0	0	30	101
5:30 PM	0	0	0	0	0	0	1	0	1	16	0	0	0	11	0	0	29	113
5:45 PM	0	0	0	0	0	0	1	0	1	23	0	0	0	5	0	0	30	113
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	0	0	8	0	8	68	0	0	0	36	0	0	120	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: NC 39 -- Old US Hwy 264
CITY/STATE: Zebulon, NC

QC JOB #: 15971103
DATE: Wed, Oct 5 2022

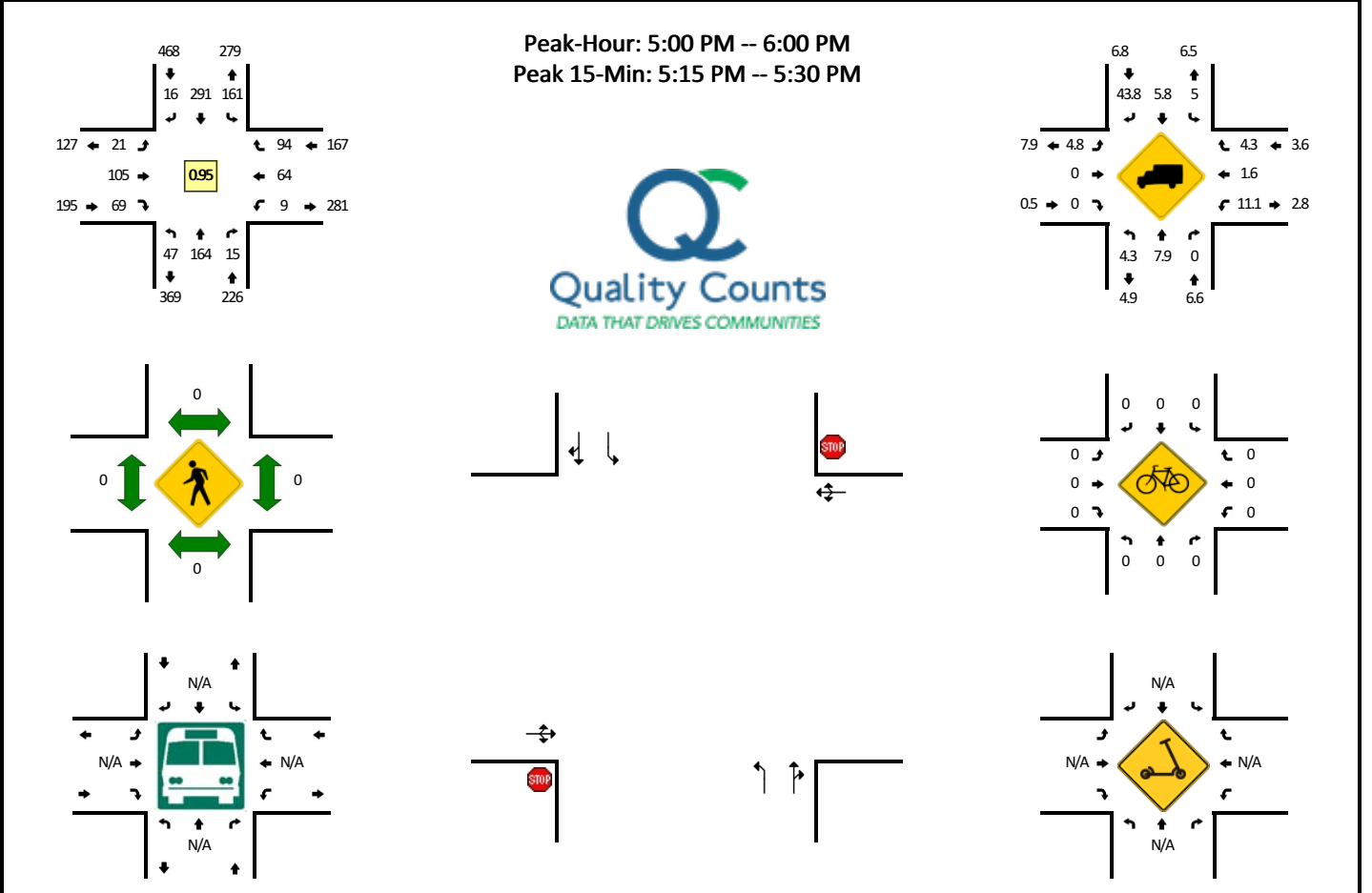


15-Min Count Period Beginning At	NC 39 (Northbound)				NC 39 (Southbound)				Old US Hwy 264 (Eastbound)				Old US Hwy 264 (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
7:00 AM	13	72	5	0	20	26	4	0	0	2	7	0	1	18	35	0	203		
7:15 AM	6	73	2	0	13	41	2	0	2	6	3	0	3	20	47	0	218		
7:30 AM	7	78	6	0	21	31	0	0	0	6	7	0	3	20	25	0	204		
7:45 AM	7	70	2	0	27	22	3	0	2	12	5	0	2	17	41	0	210	835	
8:00 AM	10	78	1	0	27	28	3	0	1	2	6	0	3	16	20	0	195	827	
8:15 AM	15	44	1	0	22	25	0	0	1	2	6	0	2	10	21	0	149	758	
8:30 AM	6	57	4	0	15	25	1	0	1	7	3	0	3	9	19	0	150	704	
8:45 AM	8	48	1	0	15	24	7	0	1	5	8	0	0	16	18	0	151	645	
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
All Vehicles	24	292	8	0	52	164	8	0	8	24	12	0	12	80	188	0	872		
Heavy Trucks	4	24	0		4	36	4		4	4	0		8	0	12		100		
Buses																			
Pedestrians		0				0				0				0				0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0		
Scoters																		0	

Comments:

LOCATION: NC 39 -- Old US Hwy 264
CITY/STATE: Zebulon, NC

QC JOB #: 15971104
DATE: Wed, Oct 5 2022

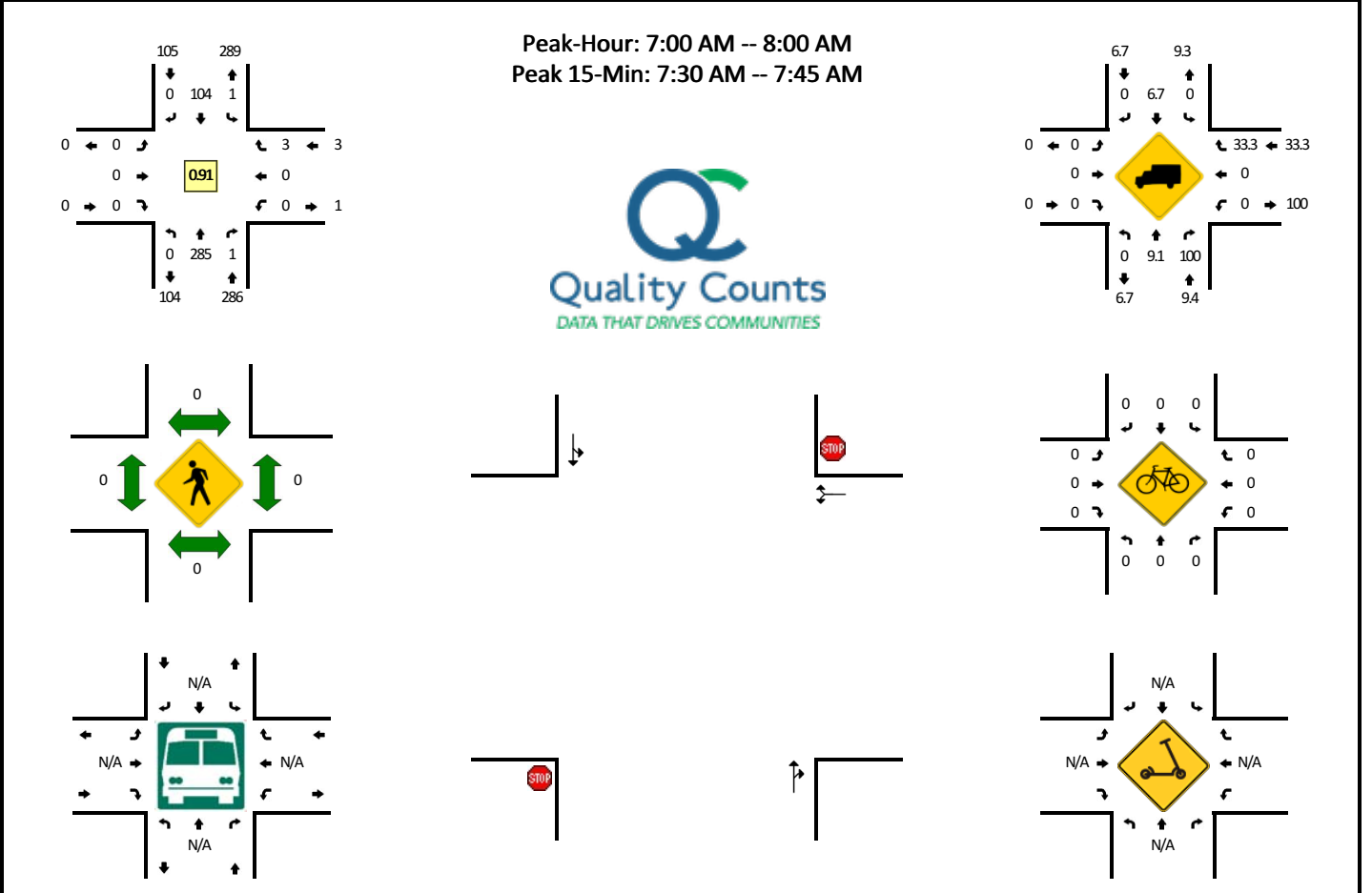


15-Min Count Period Beginning At	NC 39 (Northbound)				NC 39 (Southbound)				Old US Hwy 264 (Eastbound)				Old US Hwy 264 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	39	3	0	39	65	1	0	1	14	14	0	6	16	32	0	238	
4:15 PM	10	29	2	0	32	65	1	0	3	26	12	0	5	16	27	0	228	
4:30 PM	14	43	1	0	37	61	3	0	2	20	15	0	6	21	25	0	248	
4:45 PM	6	32	2	0	36	76	2	0	3	20	17	0	2	20	24	0	240	954
5:00 PM	15	32	3	0	27	88	4	0	10	31	18	0	5	15	26	0	274	990
5:15 PM	7	43	7	0	57	71	5	0	3	24	11	0	1	23	26	0	278	1040
5:30 PM	14	46	1	0	39	68	6	0	2	24	18	0	2	10	22	0	252	1044
5:45 PM	11	43	4	0	38	64	1	0	6	26	22	0	1	16	20	0	252	1056
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	28	172	28	0	228	284	20	0	12	96	44	0	4	92	104	0	1112	
Heavy Trucks	0	16	0		8	24	4		0	0	0		0	4	4		60	
Buses																		
Pedestrians		0				0				0				0				0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0			0
Scoters																		

Comments:

LOCATION: S Arendell Ave -- Temple-Johnson Rd
CITY/STATE: Zebulon, NC

QC JOB #: 15971105
DATE: Wed, Oct 5 2022

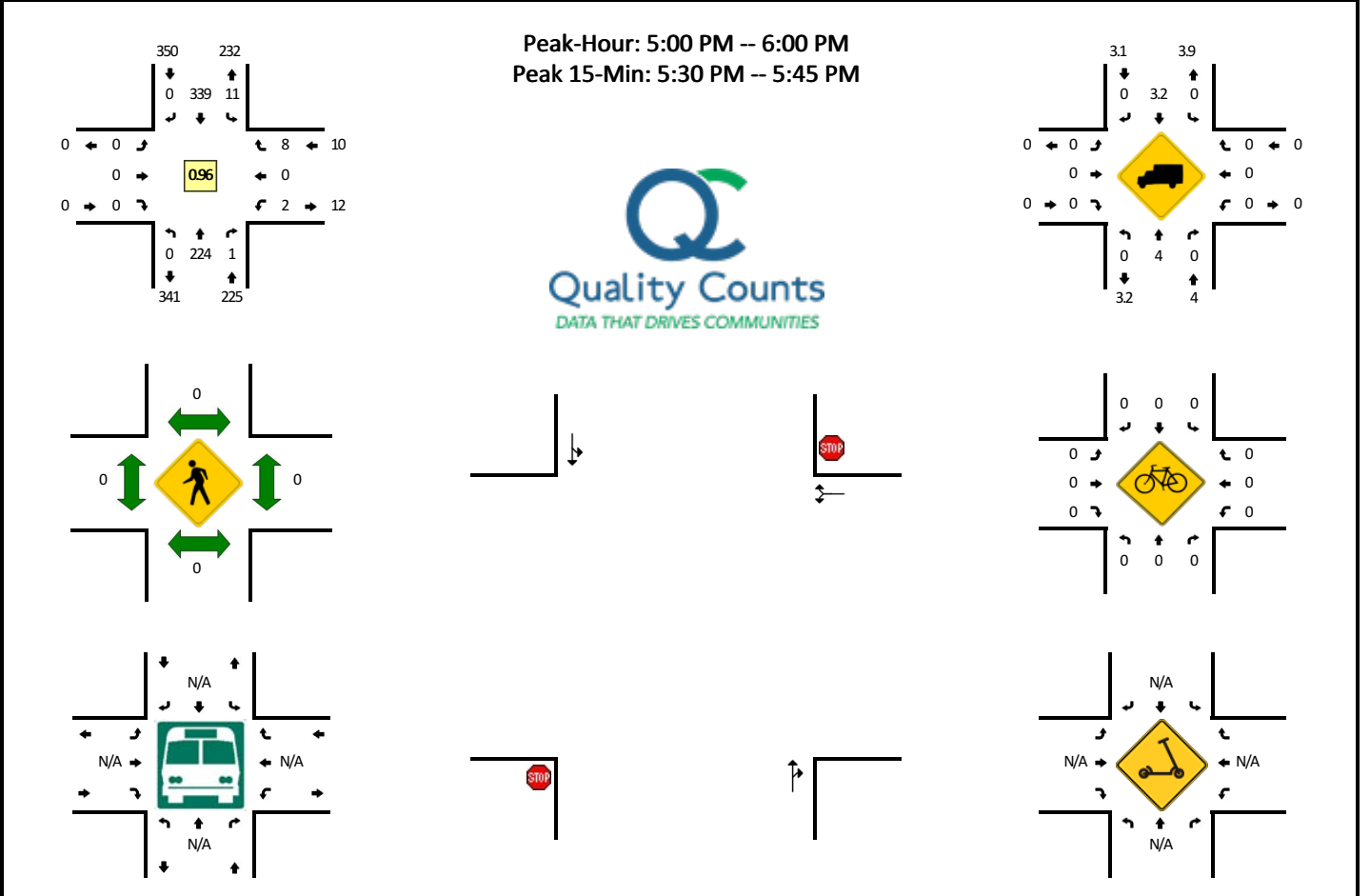


15-Min Count Period Beginning At	S Arendell Ave (Northbound)				S Arendell Ave (Southbound)				Temple-Johnson Rd (Eastbound)				Temple-Johnson Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	77	0	0	0	17	0	0	0	0	0	0	0	0	0	0	94	
7:15 AM	0	64	1	0	0	34	0	1	0	0	0	0	0	0	1	0	101	
7:30 AM	0	82	0	0	0	25	0	0	0	0	0	0	0	0	1	0	108	
7:45 AM	0	62	0	0	0	28	0	0	0	0	0	0	0	0	1	0	91	394
8:00 AM	0	53	0	0	0	29	0	0	0	0	0	0	0	0	1	0	83	383
8:15 AM	0	44	0	0	1	22	0	0	0	0	0	0	1	0	0	0	68	350
8:30 AM	0	57	0	0	0	31	0	0	0	0	0	0	0	0	2	0	90	332
8:45 AM	0	63	0	0	0	36	0	0	0	0	0	0	0	0	0	0	99	340
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	328	0	0	0	100	0	0	0	0	0	0	0	0	4	0	432	
Heavy Trucks	0	44	0	0	0	0	0	0	0	0	0	0	0	0	4	0	48	
Buses																		
Pedestrians		0				0					0			0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: S Arendell Ave -- Temple-Johnson Rd
CITY/STATE: Zebulon, NC

QC JOB #: 15971106
DATE: Wed, Oct 5 2022

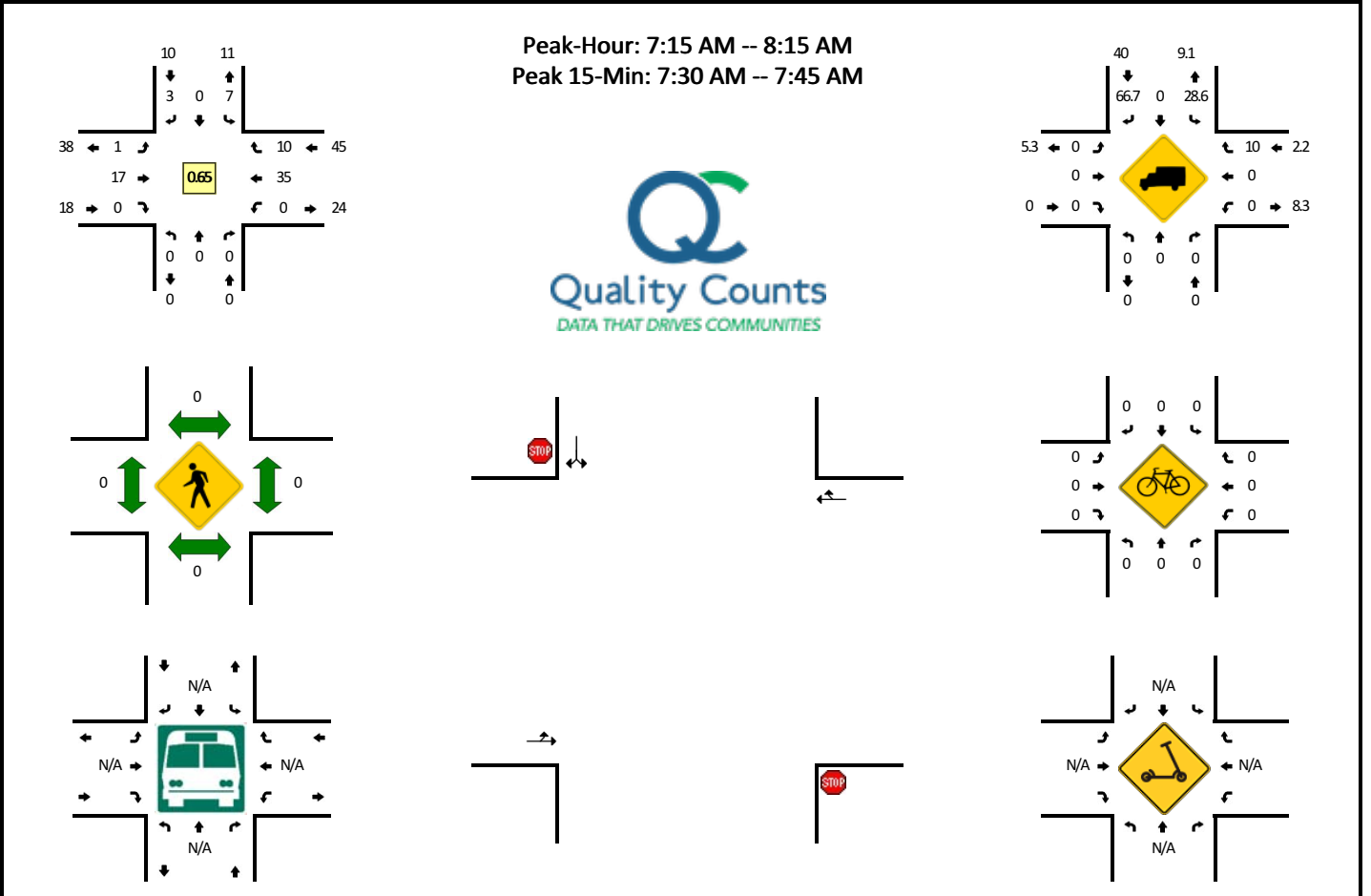


15-Min Count Period Beginning At	S Arendell Ave (Northbound)				S Arendell Ave (Southbound)				Temple-Johnson Rd (Eastbound)				Temple-Johnson Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	49	0	0	1	76	0	0	0	0	0	0	2	0	4	0	132	
4:15 PM	0	57	1	0	2	69	1	0	0	0	0	0	0	0	3	0	133	
4:30 PM	0	36	2	1	2	82	0	0	0	0	0	0	0	0	0	0	123	
4:45 PM	0	63	0	0	1	73	0	0	0	0	0	0	0	0	2	0	139	527
5:00 PM	0	42	0	0	8	92	0	0	0	0	0	0	0	0	2	0	144	539
5:15 PM	0	55	0	0	1	78	0	0	0	0	0	0	0	0	1	0	135	541
5:30 PM	0	68	0	0	1	82	0	0	0	0	0	0	1	0	1	0	153	571
5:45 PM	0	59	1	0	1	87	0	0	0	0	0	0	1	0	4	0	153	585
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	272	0	0	4	328	0	0	0	0	0	0	4	0	4	0	612	
Heavy Trucks	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	12	
Buses																	0	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scooters																	0	

Comments:

LOCATION: Chamblee Rd -- Perry Curtis Rd
CITY/STATE: Zebulon, NC

QC JOB #: 15971107
DATE: Wed, Oct 5 2022



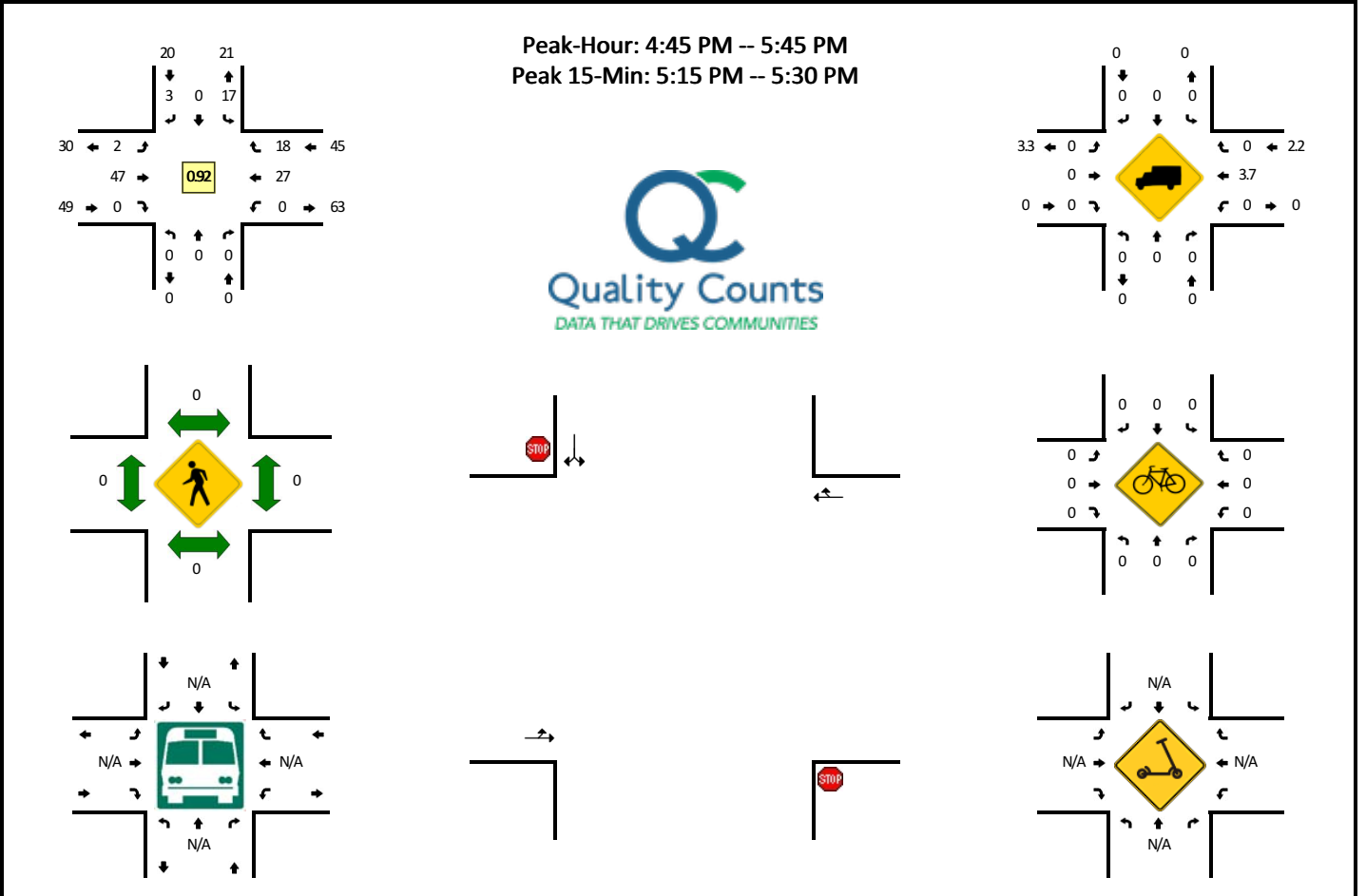
15-Min Count Period Beginning At	Chamblee Rd (Northbound)				Chamblee Rd (Southbound)				Perry Curtis Rd (Eastbound)				Perry Curtis Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	1	0	0	0	0	2	0	0	0	5	1	0	9	
7:15 AM	0	0	0	0	1	0	1	0	0	3	0	0	0	7	1	0	13	
7:30 AM	0	0	0	0	3	0	1	0	1	5	0	0	0	13	5	0	28	
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	7	4	0	13	63
8:00 AM	0	0	0	0	3	0	1	0	0	7	0	0	0	8	0	0	19	73
8:15 AM	0	0	0	0	1	0	0	0	0	2	0	0	0	7	3	0	13	73
8:30 AM	0	0	0	0	1	0	0	0	0	4	0	0	0	4	3	0	12	57
8:45 AM	0	0	0	0	4	0	0	0	0	6	0	0	0	7	4	0	21	65

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	12	0	4	0	4	20	0	0	0	52	20	0	112
Heavy Trucks	0	0	0	0	4	0	4	0	0	0	0	0	0	0	4	0	12
Buses																	0
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	0

Comments:

LOCATION: Chamblee Rd -- Perry Curtis Rd
CITY/STATE: Zebulon, NC

QC JOB #: 15971108
DATE: Wed, Oct 5 2022

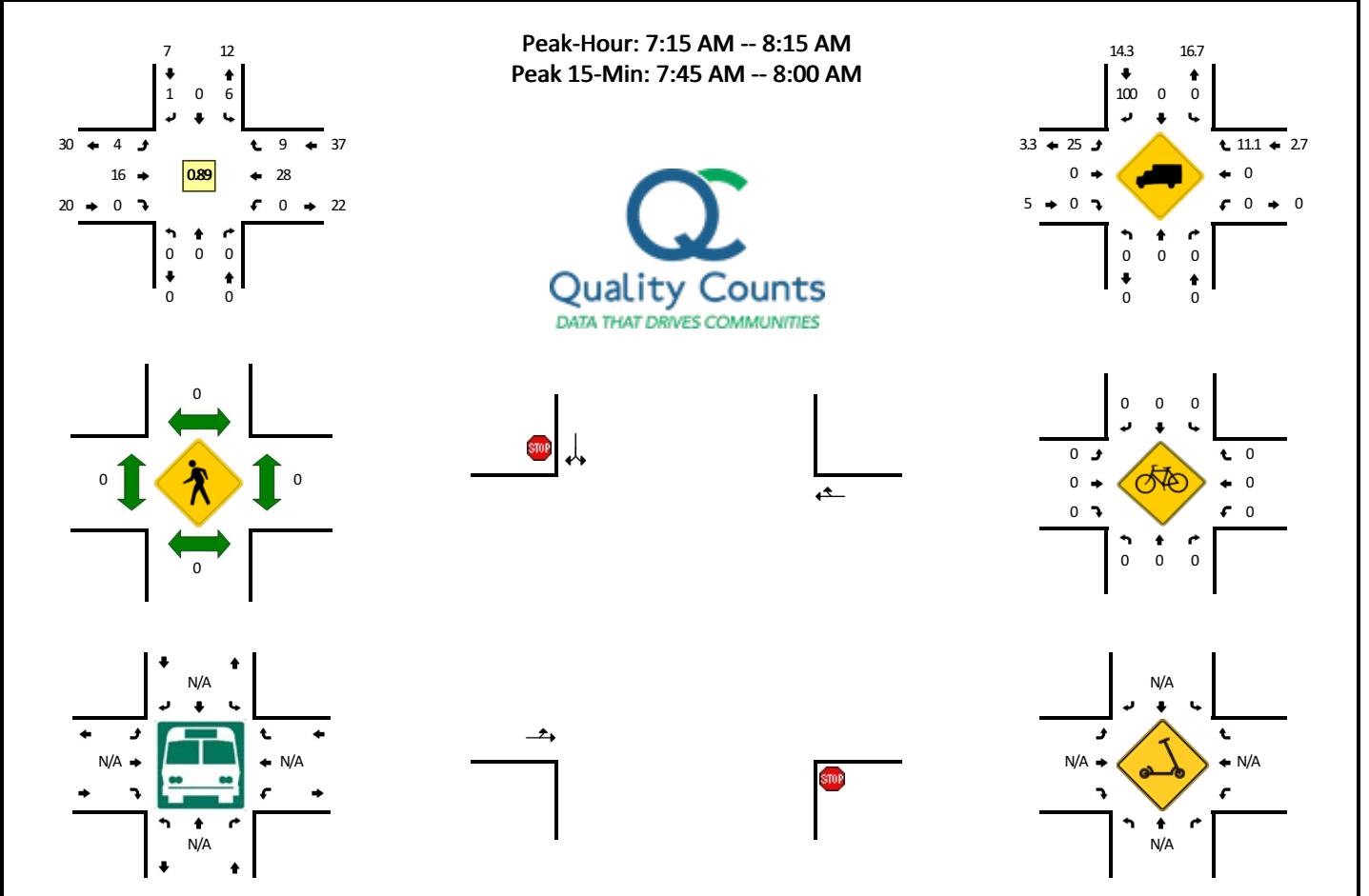


15-Min Count Period Beginning At	Chamblee Rd (Northbound)				Chamblee Rd (Southbound)				Perry Curtis Rd (Eastbound)				Perry Curtis Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	5	0	2	0	0	9	0	0	0	4	0	1	21	
4:15 PM	0	0	0	0	5	0	0	0	1	3	0	0	0	8	4	0	21	
4:30 PM	0	0	0	0	4	0	3	0	0	11	0	1	0	2	2	0	23	
4:45 PM	0	0	0	0	2	0	1	0	0	15	0	0	0	6	3	0	27	92
5:00 PM	0	0	0	0	5	0	2	1	1	9	0	0	0	5	3	0	26	97
5:15 PM	0	0	0	0	5	0	0	0	0	12	0	0	0	10	4	0	31	107
5:30 PM	0	0	0	0	4	0	0	0	1	11	0	0	0	6	8	0	30	114
5:45 PM	0	0	0	0	2	0	0	0	0	16	0	0	0	4	2	0	24	111
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	20	0	0	0	0	48	0	0	0	40	16	0	124	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: Chamblee Rd -- Wake County Line Rd_Perry Curtis Rd
CITY/STATE: Johnston, NC

QC JOB #: 15856801
DATE: Thu, Jun 9 2022

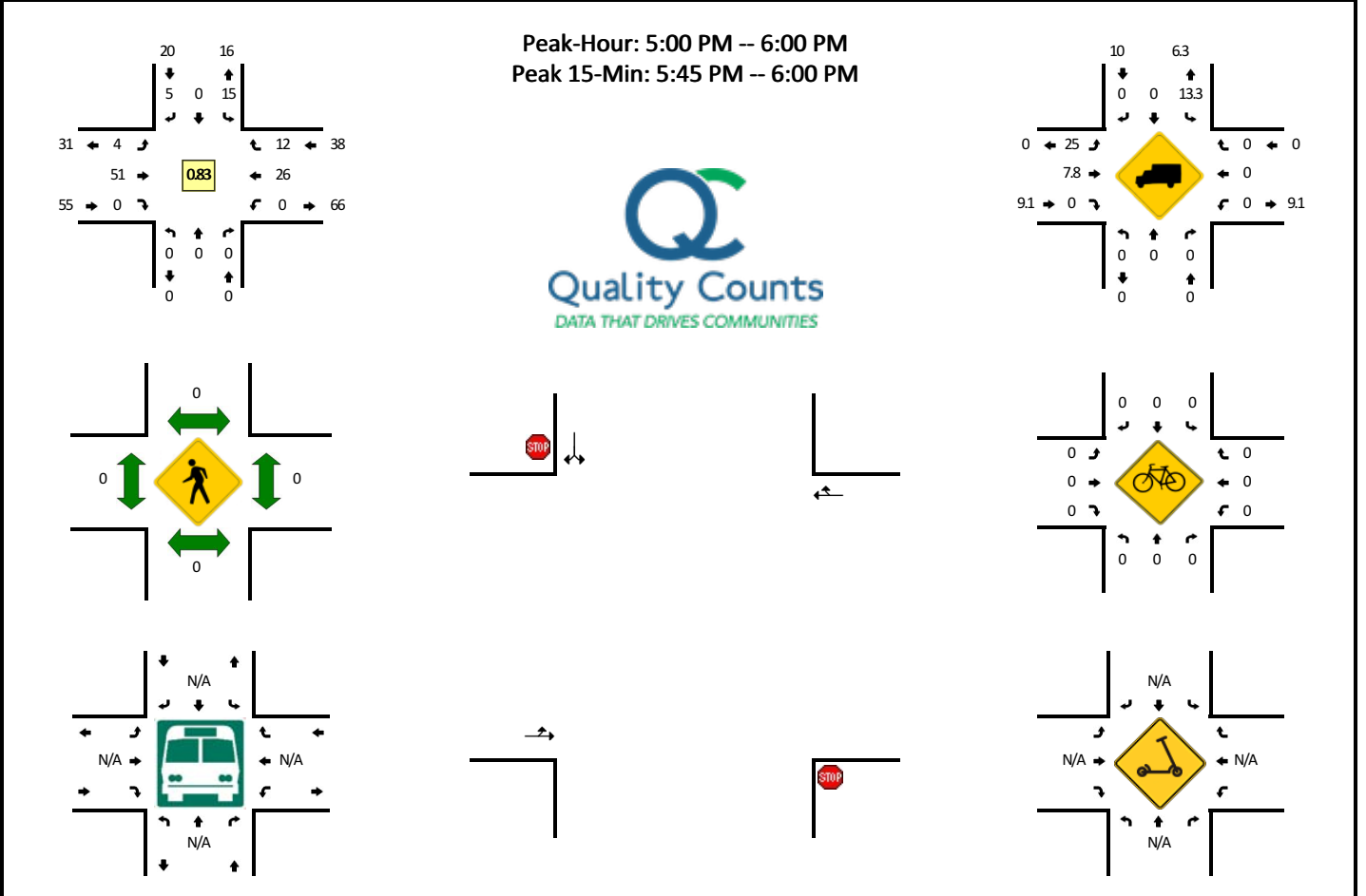


15-Min Count Period Beginning At	Chamblee Rd (Northbound)				Chamblee Rd (Southbound)				Wake County Line Rd_Perry Curtis Rd (Eastbound)				Wake County Line Rd_Perry Curtis Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	9	3	0	12	
7:15 AM	0	0	0	0	1	0	0	0	1	4	0	1	0	8	2	0	17	
7:30 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	8	1	0	15	
7:45 AM	0	0	0	0	3	0	1	0	1	0	0	0	0	8	5	0	18	62
8:00 AM	0	0	0	0	2	0	0	0	1	6	0	0	0	4	1	0	14	64
8:15 AM	0	0	0	0	0	0	0	0	1	5	0	0	0	7	4	0	17	64
8:30 AM	0	0	0	0	0	0	1	0	1	2	0	1	0	7	3	0	15	64
8:45 AM	0	0	0	0	1	0	0	0	0	4	0	0	0	6	2	0	13	59
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	12	0	4	0	4	0	0	0	0	32	20	0	72	
Heavy Trucks	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0	8	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Scoters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Comments:

LOCATION: Chamblee Rd -- Wake County Line Rd_Perry Curtis Rd
CITY/STATE: Johnston, NC

QC JOB #: 15856802
DATE: Thu, Jun 9 2022

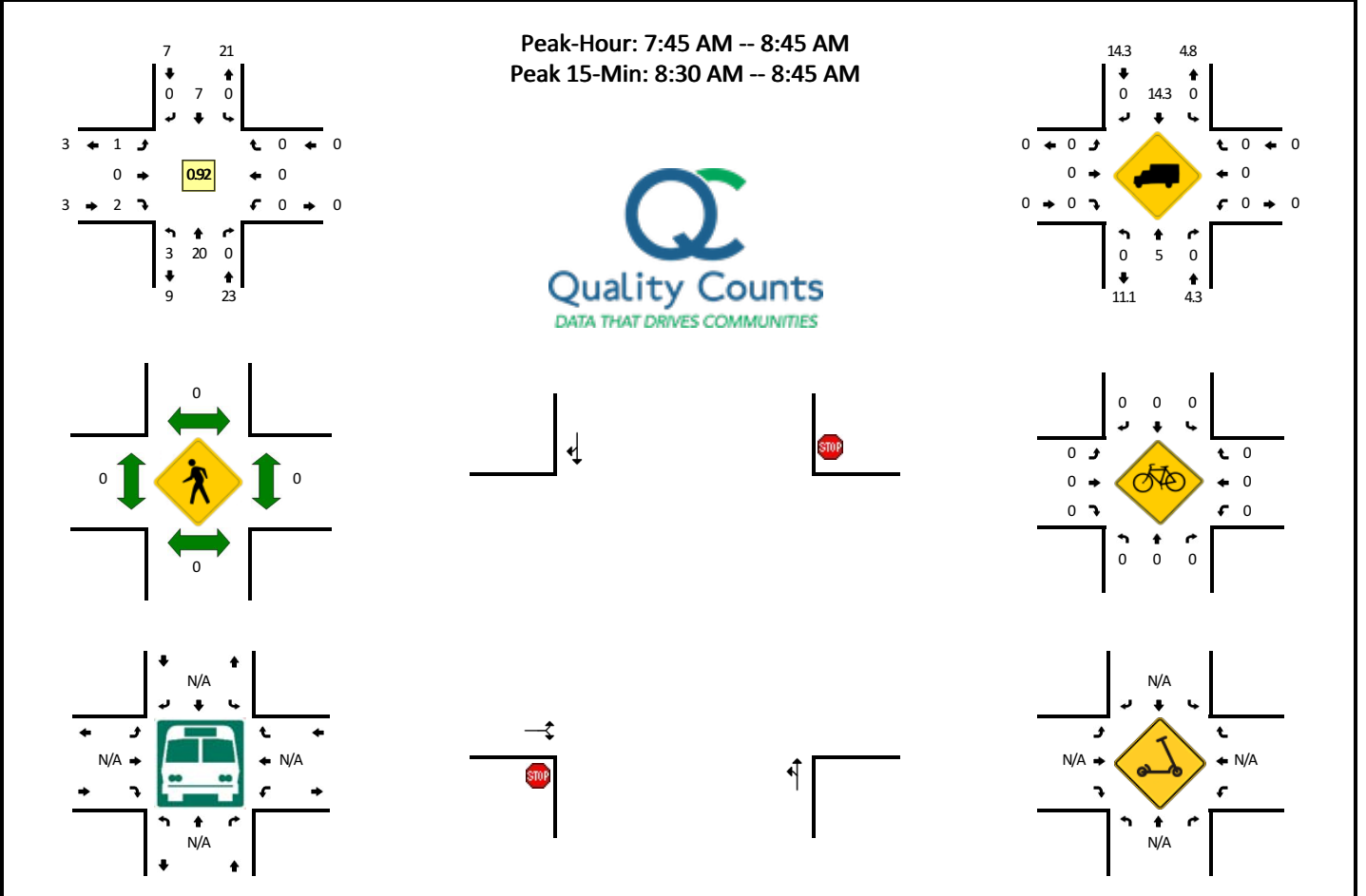


15-Min Count Period Beginning At	Chamblee Rd (Northbound)				Chamblee Rd (Southbound)				Wake County Line Rd_Perry Curtis Rd (Eastbound)				Wake County Line Rd_Perry Curtis Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	3	0	1	0	0	9	0	0	0	7	3	0	23	
4:15 PM	0	0	0	0	8	0	3	0	0	13	0	0	0	3	1	0	28	
4:30 PM	0	0	0	0	3	0	0	0	0	8	0	0	0	8	3	0	22	
4:45 PM	0	0	0	0	6	0	0	0	1	4	0	0	0	4	0	0	15	88
5:00 PM	0	0	0	0	7	0	2	0	1	15	0	0	0	4	3	0	32	97
5:15 PM	0	0	0	0	5	0	2	0	1	9	0	0	0	5	2	0	24	93
5:30 PM	0	0	0	0	2	0	0	0	0	11	0	0	0	6	4	0	23	94
5:45 PM	0	0	0	0	1	0	1	0	2	16	0	0	0	11	3	0	34	113
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	4	0	4	0	8	64	0	0	0	44	12	0	136	
Heavy Trucks	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Scoters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Comments:

LOCATION: Chamblee Rd -- Temple-Johnson Rd
CITY/STATE: Wake, NC

QC JOB #: 15856803
DATE: Thu, Jun 9 2022

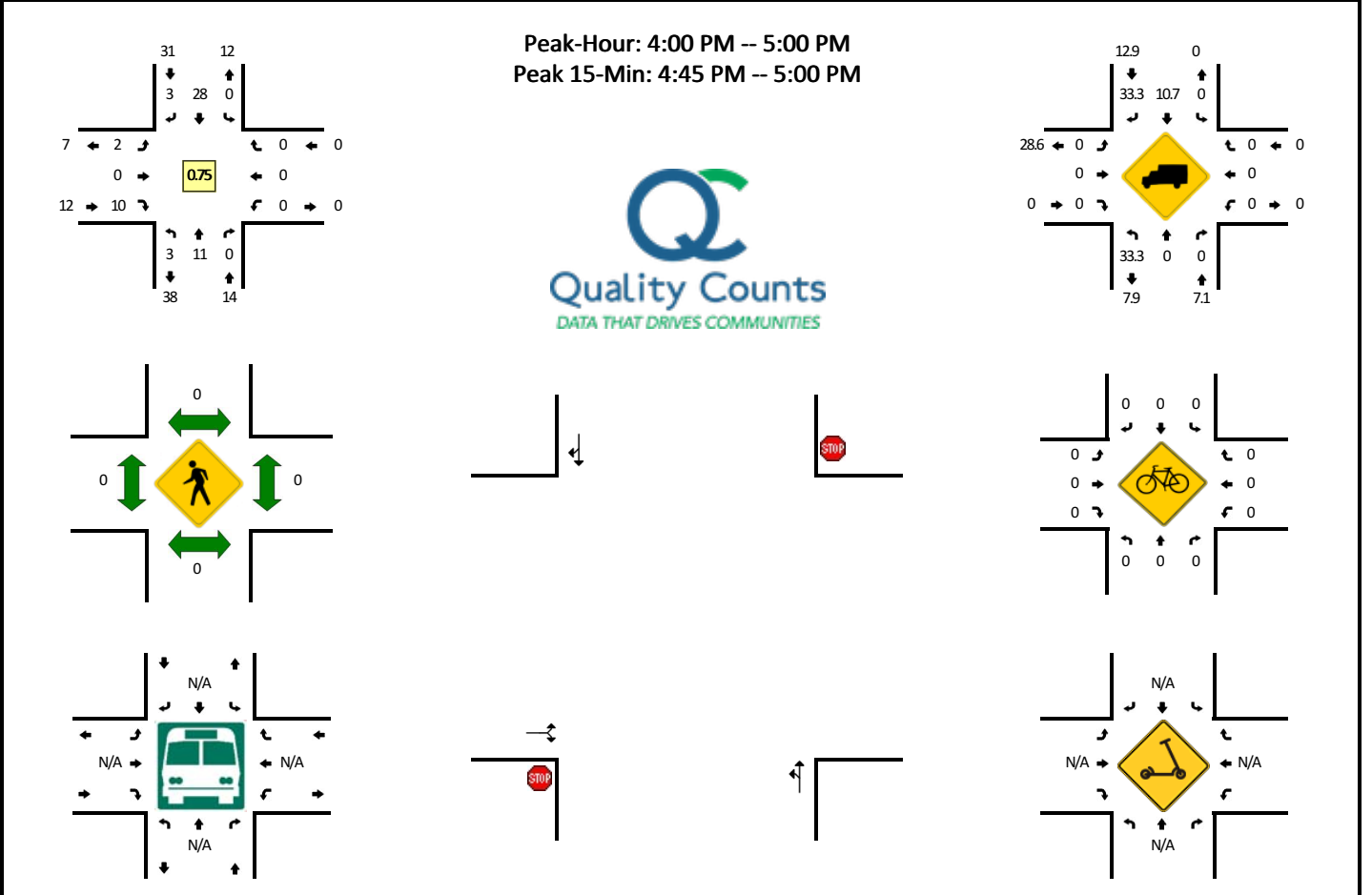


15-Min Count Period Beginning At	Chamblee Rd (Northbound)				Chamblee Rd (Southbound)				Temple-Johnson Rd (Eastbound)				Temple-Johnson Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	
7:15 AM	1	5	0	0	0	2	0	1	0	0	1	0	0	0	0	0	10	
7:30 AM	0	2	0	0	0	2	0	1	0	0	0	0	0	0	0	0	5	
7:45 AM	1	6	0	0	0	1	0	0	0	0	0	0	0	0	0	0	8	27
8:00 AM	0	4	0	0	0	3	0	0	0	0	1	0	0	0	0	0	8	31
8:15 AM	1	4	0	0	0	3	0	0	0	0	0	0	0	0	0	0	8	29
8:30 AM	1	6	0	0	0	0	0	0	1	0	1	0	0	0	0	0	9	33
8:45 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	28
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	24	0	0	0	0	0	0	4	0	4	0	0	0	0	0	36	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: Chamblee Rd -- Temple-Johnson Rd
CITY/STATE: Wake, NC

QC JOB #: 15856804
DATE: Thu, Jun 9 2022

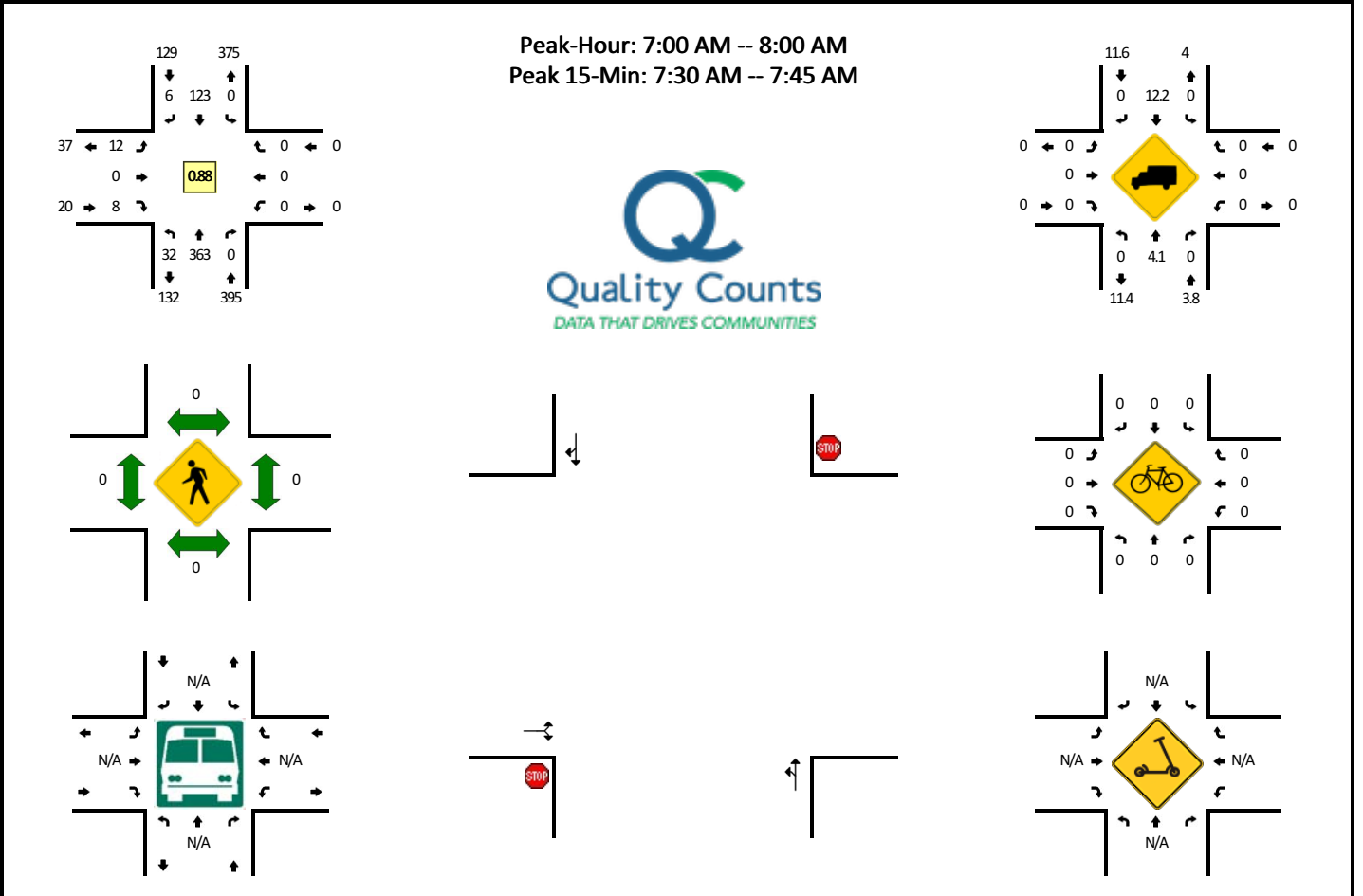


15-Min Count Period Beginning At	Chamblee Rd (Northbound)				Chamblee Rd (Southbound)				Temple-Johnson Rd (Eastbound)				Temple-Johnson Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	5	0	0	0	9	0	0	0	0	2	0	0	0	0	0	17	
4:15 PM	0	2	0	0	0	7	0	0	0	0	3	1	0	0	0	0	13	
4:30 PM	0	2	0	0	0	3	1	0	1	0	1	0	0	0	0	0	8	
4:45 PM	2	2	0	0	0	9	2	0	0	0	4	0	0	0	0	0	19	57
5:00 PM	0	4	0	0	0	3	1	0	0	0	3	0	0	0	0	0	11	51
5:15 PM	2	1	0	0	0	8	0	0	0	0	3	0	0	0	0	0	14	52
5:30 PM	0	5	0	0	0	1	1	0	0	0	0	0	0	0	0	0	7	51
5:45 PM	0	4	0	0	0	2	1	0	0	0	0	0	0	0	0	0	7	39
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	8	8	0	0	0	36	8	0	0	0	16	0	0	0	0	0	76	
Heavy Trucks	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	8	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scooters																		

Comments:

LOCATION: NC 39 -- Wake County Line Rd
CITY/STATE: Johnston, NC

QC JOB #: 15856805
DATE: Thu, Jun 9 2022

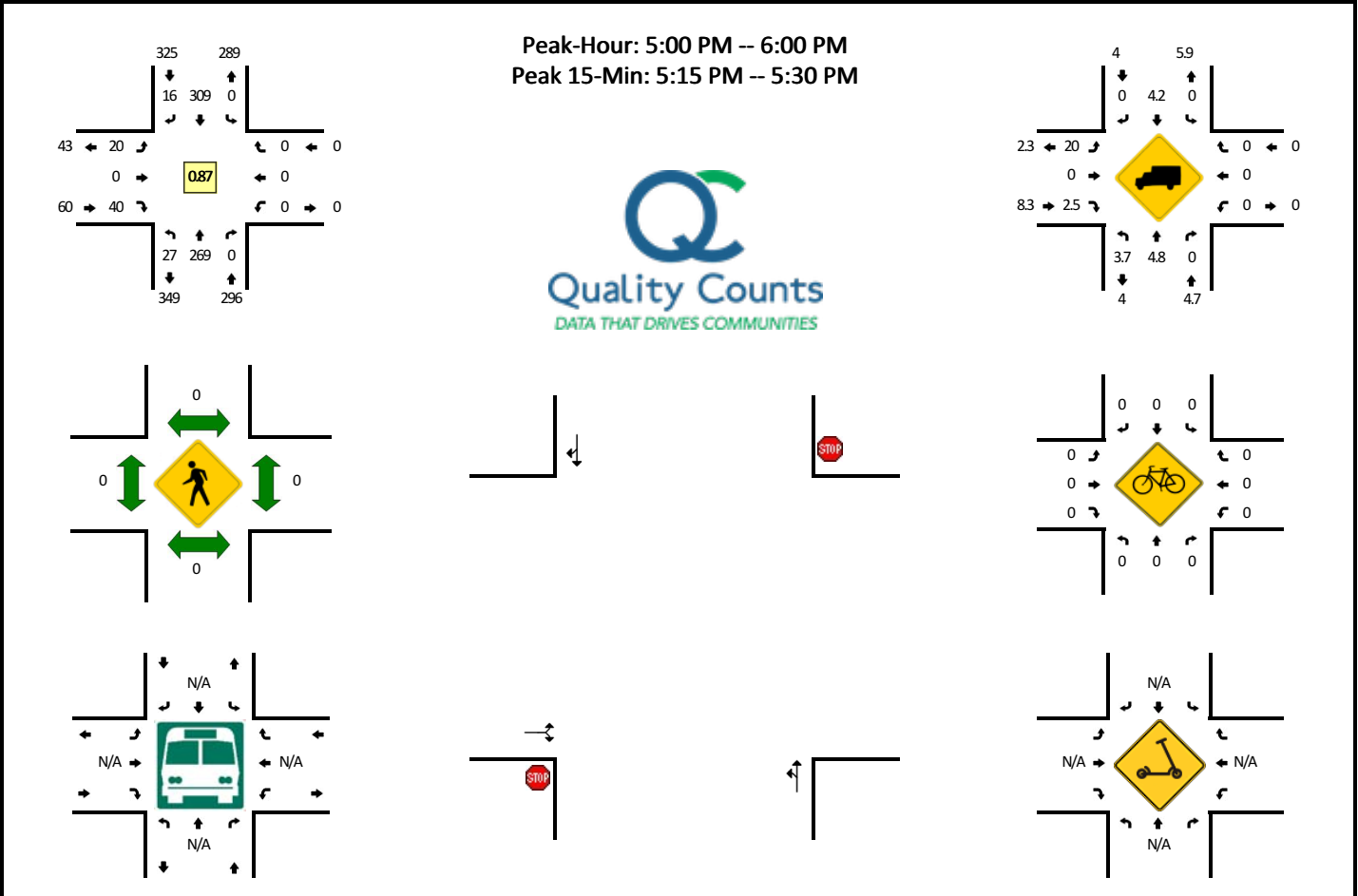


15-Min Count Period Beginning At	NC 39 (Northbound)				NC 39 (Southbound)				Wake County Line Rd (Eastbound)				Wake County Line Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	9	92	0	0	0	23	3	0	3	0	0	0	0	0	0	0	130	
7:15 AM	6	94	0	1	0	33	1	0	3	0	3	0	0	0	0	0	141	
7:30 AM	10	106	0	0	0	31	1	0	4	0	3	0	0	0	0	0	155	
7:45 AM	6	71	0	0	0	36	1	0	2	0	2	0	0	0	0	0	118	544
8:00 AM	4	61	0	0	0	26	1	0	2	0	6	0	0	0	0	0	100	514
8:15 AM	8	74	0	0	0	24	3	0	3	0	2	0	0	0	0	0	114	487
8:30 AM	8	57	0	0	0	36	1	0	1	0	1	0	0	0	0	0	104	436
8:45 AM	5	35	0	0	0	21	4	0	5	0	2	0	0	0	0	0	72	390
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	40	424	0	0	0	124	4	0	16	0	12	0	0	0	0	0	620	
Heavy Trucks	0	12	0	0	0	4	0	0	0	0	0	0	0	0	0	0	16	
Buses																	0	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																	0	

Comments:

LOCATION: NC 39 -- Wake County Line Rd
CITY/STATE: Johnston, NC

QC JOB #: 15856806
DATE: Thu, Jun 9 2022

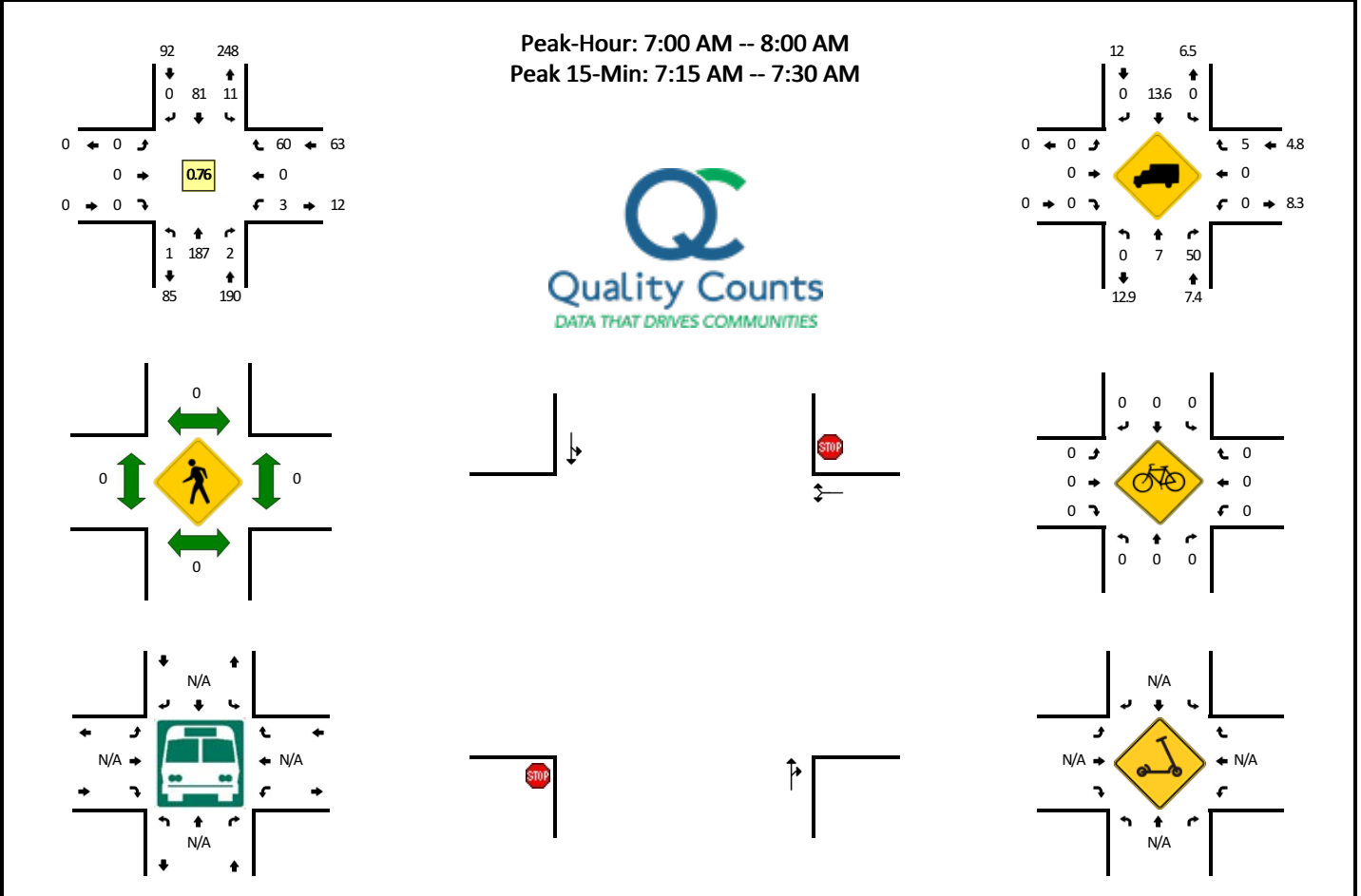


15-Min Count Period Beginning At	NC 39 (Northbound)				NC 39 (Southbound)				Wake County Line Rd (Eastbound)				Wake County Line Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	30	0	0	0	87	2	0	2	0	8	0	0	0	0	0	136	
4:15 PM	2	48	0	0	0	74	8	0	3	0	12	0	0	0	0	0	147	
4:30 PM	7	60	0	0	0	53	3	0	1	0	7	0	0	0	0	0	131	
4:45 PM	1	55	0	0	0	71	4	0	4	0	9	0	0	0	0	0	144	558
5:00 PM	5	63	0	0	0	78	2	0	8	0	9	0	0	0	0	0	165	587
5:15 PM	5	80	0	0	0	91	3	0	5	0	12	0	0	0	0	0	196	636
5:30 PM	8	66	0	0	0	66	7	0	2	0	12	0	0	0	0	0	161	666
5:45 PM	9	60	0	0	0	74	4	0	5	0	7	0	0	0	0	0	159	681
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	20	320	0	0	0	364	12	0	20	0	48	0	0	0	0	0	784	
Heavy Trucks	0	8	0	0	0	20	0	0	12	0	4	0	0	0	0	0	44	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: NC 96 -- Perry Curtis Rd
CITY/STATE: Wake, NC

QC JOB #: 15856807
DATE: Thu, Jun 9 2022

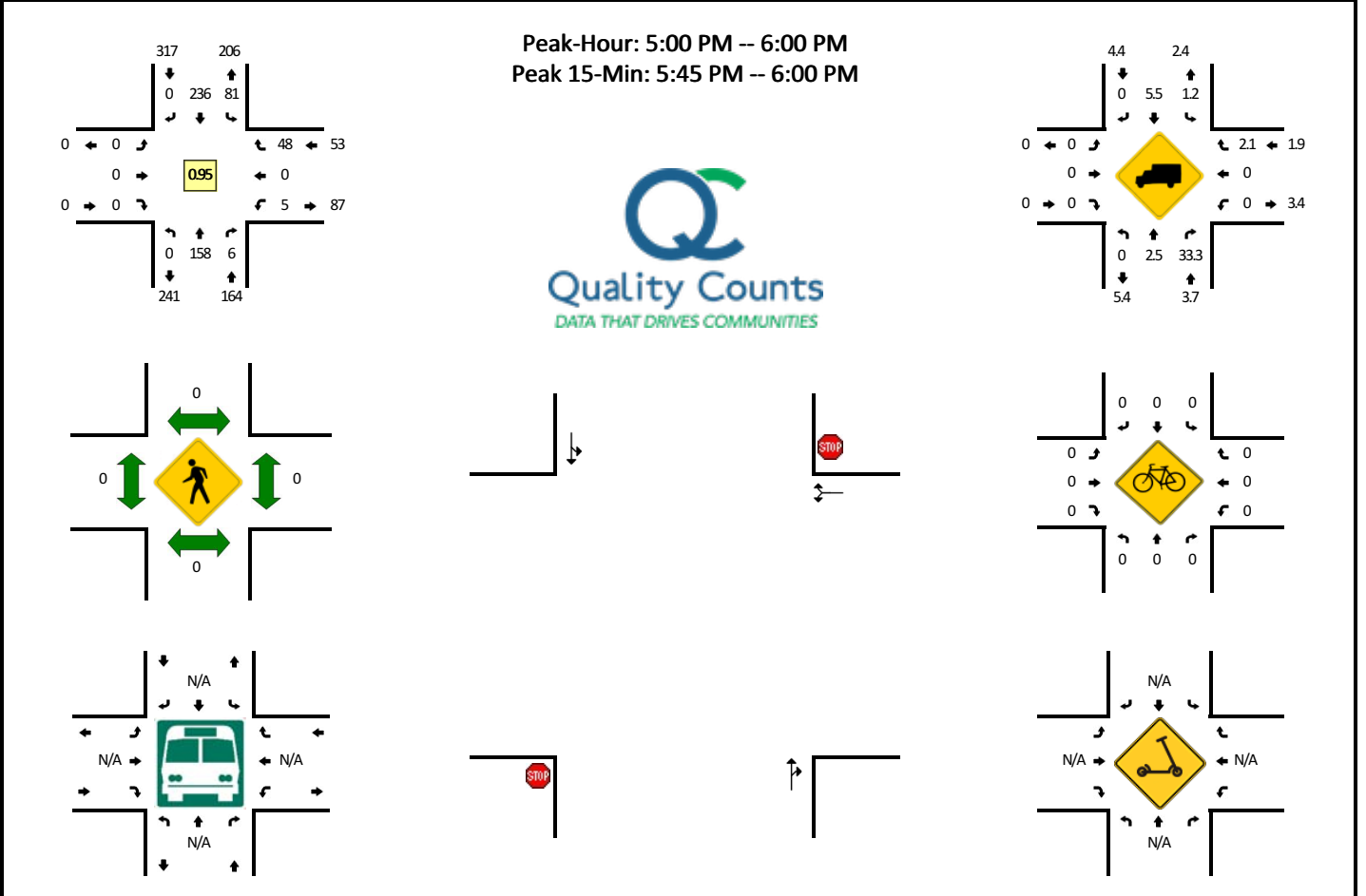


15-Min Count Period Beginning At	NC 96 (Northbound)				NC 96 (Southbound)				Perry Curtis Rd (Eastbound)				Perry Curtis Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	45	1	0	2	20	0	0	0	0	0	0	1	0	17	0	86	
7:15 AM	0	63	0	0	1	26	0	0	0	0	0	0	2	0	21	0	113	
7:30 AM	0	45	0	0	5	22	0	0	0	0	0	0	0	0	10	0	82	
7:45 AM	0	34	1	1	2	13	0	1	0	0	0	0	0	0	12	0	64	345
8:00 AM	0	39	0	0	6	14	0	0	0	0	0	0	0	0	16	0	75	334
8:15 AM	0	26	0	0	5	18	0	0	0	0	0	0	0	0	10	0	59	280
8:30 AM	0	32	0	0	6	21	0	0	0	0	0	0	0	0	12	0	71	269
8:45 AM	0	32	0	0	5	20	0	0	0	0	0	0	0	0	10	0	67	272
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	252	0	0	4	104	0	0	0	0	0	0	8	0	84	0	452	
Heavy Trucks	0	20	0	0	0	28	0	0	0	0	0	0	0	0	0	0	48	
Buses																		
Pedestrians		0				0					0				0		0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: NC 96 -- Perry Curtis Rd
CITY/STATE: Wake, NC

QC JOB #: 15856808
DATE: Thu, Jun 9 2022



15-Min Count Period Beginning At	NC 96 (Northbound)				NC 96 (Southbound)				Perry Curtis Rd (Eastbound)				Perry Curtis Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	26	3	0	12	50	0	0	0	0	0	0	0	0	10	0	101	
4:15 PM	0	34	2	0	18	56	0	0	0	0	0	0	2	0	9	0	121	
4:30 PM	0	40	1	0	18	52	0	0	0	0	0	0	0	0	14	0	125	
4:45 PM	0	48	0	0	19	53	0	0	0	0	0	0	0	0	12	0	132	479
5:00 PM	0	52	1	0	26	50	0	0	0	0	0	0	1	0	8	0	138	516
5:15 PM	0	33	1	0	11	64	0	0	0	0	0	0	2	0	13	0	124	519
5:30 PM	0	37	2	0	21	61	0	0	0	0	0	0	2	0	9	0	132	526
5:45 PM	0	36	2	0	23	61	0	0	0	0	0	0	0	0	18	0	140	534

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	144	8	0	92	244	0	0	0	0	0	0	0	0	72	0	560
Heavy Trucks	0	4	0		4	20	0		0	0	0		0	0	4		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

*APPENDIX C : ADJACENT DEVELOPMENT
INFORMATION*

TRAFFIC IMPACT ANALYSIS

FOR

SIDNEY CREEK

LOCATED

IN

ZEBULON, NORTH CAROLINA

Prepared For:

Stocks Engineering, PA
801 East Washington Street
Nashville, NC 27856

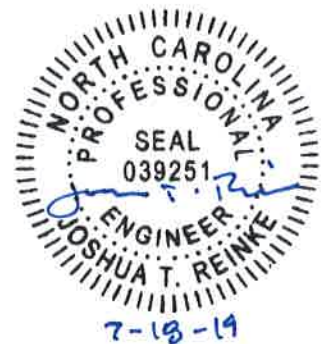
and

Dan Ryan Builders
3000 RDU Center Dr., Suite 202
Morrisville, NC 27560

Prepared By:

Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
License #C-0910

July 2019



Prepared By: CAB

Reviewed By: JTR

6. Recommendations

Based on the findings of this study, specific geometric and traffic control improvements have been identified at study intersections. The improvements are summarized below and are illustrated in Figure E-1.

Recommended Improvements by Developer

Based on previous coordination with the Town consultant, offsite improvements should be considered for a cost-share agreement (proportional share fee-in-lieu) with the Town.

NC 39 and US 264 Westbound Ramps

- Monitor the intersection for signalization and conduct a signal warrant analysis prior to the build-out of the proposed Sidney Creek development.

NC 39 and Old US 264

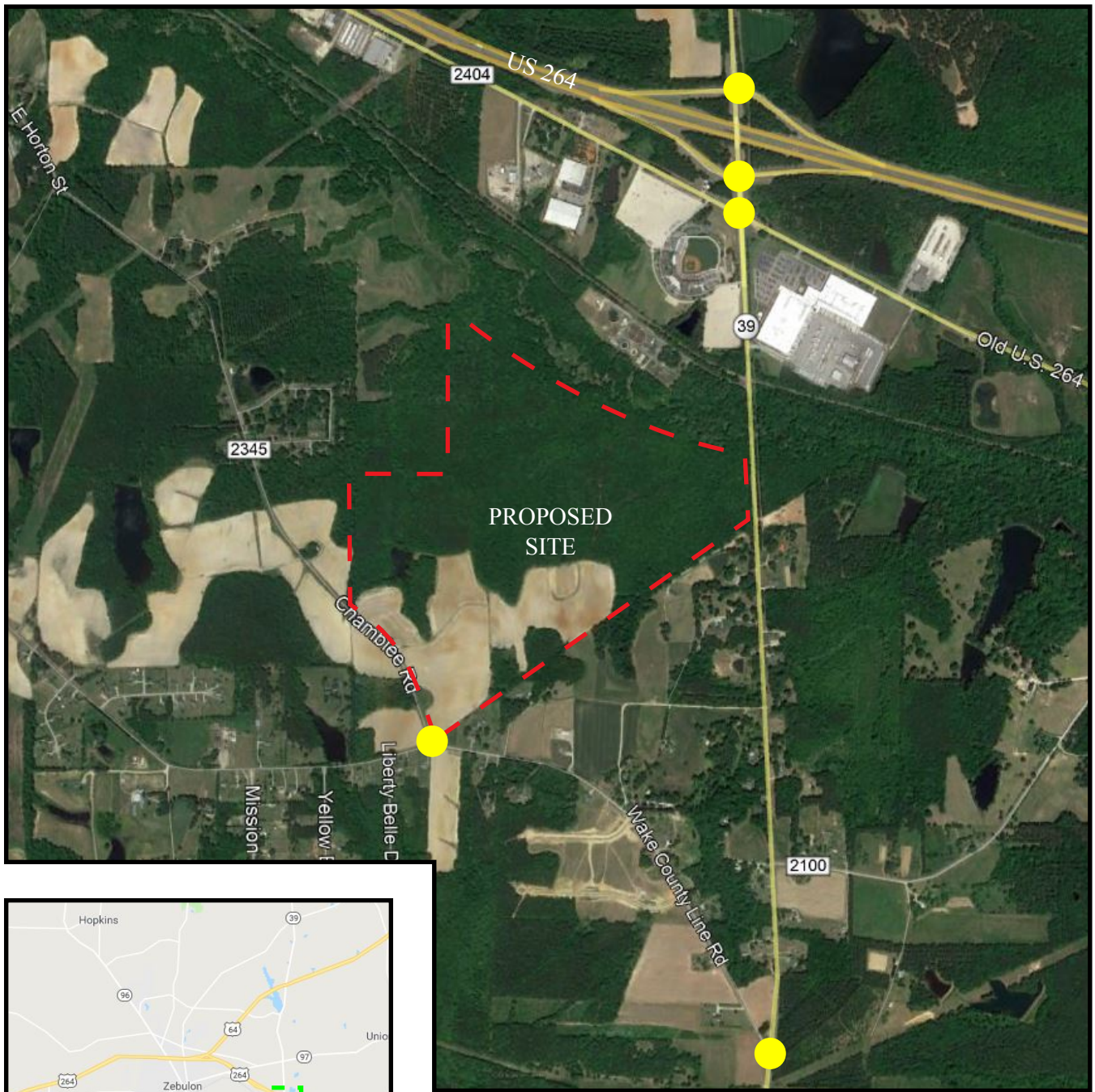
- Utilizing the existing pavement width, provide an exclusive westbound left-turn lane with maximized (approximately 50 feet) storage and appropriate taper and an exclusive westbound right-turn lane with maximized (approximately 125 feet) storage and appropriate taper and deceleration length.
- Utilizing the existing pavement width, provide an exclusive eastbound left-turn lane with maximized (approximately 50 feet) storage and appropriate taper and an exclusive eastbound right-turn lane with maximized (approximately 100 feet) storage and appropriate taper and deceleration length.
- Monitor the intersection for signalization and conduct a signal warrant analysis prior to the build-out of the proposed Sidney Creek development.
- Extend the existing southbound right-turn lane with a minimum of 100 feet of storage and appropriate taper and deceleration length.

Chamblee Road and Site Drive 1

- Construct the westbound approach (Site Drive 1) with one ingress lane and one egress lane.
- Provide stop-control for the westbound approach.

NC 39 and Site Drive 2

- Construct the eastbound approach (Site Drive 2) with one ingress lane and two egress lanes.
- Provide stop-control for the eastbound approach.
- Provide an exclusive northbound left-turn lane with a minimum of 50 feet of storage and appropriate taper and deceleration length.
- Provide an exclusive southbound right-turn lane with a minimum of 150 feet of storage and appropriate taper and deceleration length.



LEGEND

- - - Proposed Site Location
- Study Intersection
- - - Study Area



Sidney Creek
Zebulon, NC

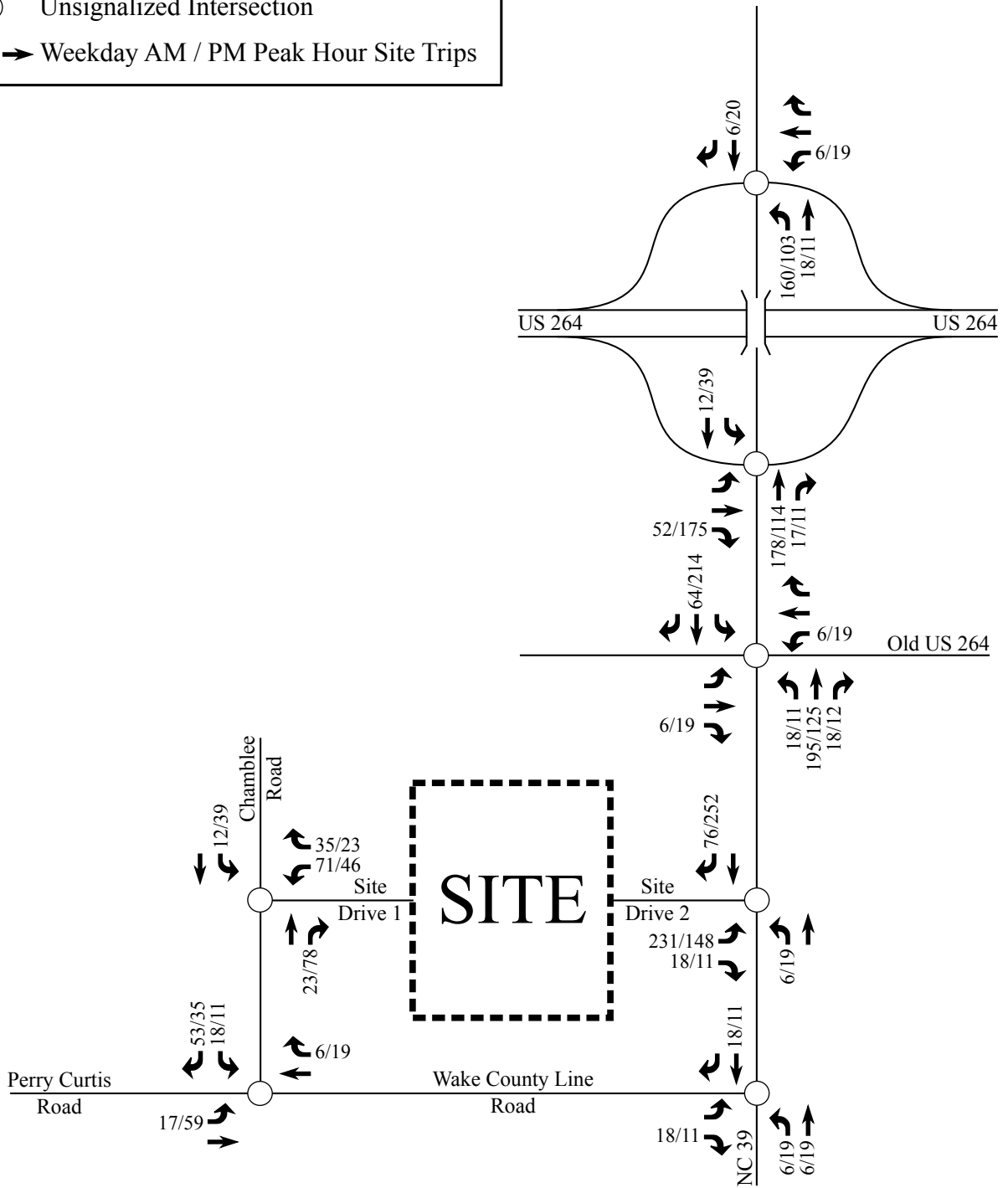
Site Location Map

Scale: Not to Scale

Figure 1

LEGEND

- Unsignalized Intersection
- x / y → Weekday AM / PM Peak Hour Site Trips



Sidney Creek
Zebulon, NC

Site Trip
Assignment

Scale: Not to Scale

Figure 9

*APPENDIX D: CAPACITY ANALYSIS RESULTS –
CHAMBLEE ROAD/E. HORTON STREET + TEMPLE-
JOHNSON ROAD*

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	4	4	20	7	4
Future Vol, veh/h	4	4	4	20	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	4	22	8	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	40	10	12	0	0
Stage 1	10	-	-	-	-
Stage 2	30	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	972	1071	1607	-	-
Stage 1	1013	-	-	-	-
Stage 2	993	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	969	1071	1607	-	-
Mov Cap-2 Maneuver	969	-	-	-	-
Stage 1	1010	-	-	-	-
Stage 2	993	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1607	-	1017	-	-
HCM Lane V/C Ratio	0.003	-	0.009	-	-
HCM Control Delay (s)	7.2	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	10	4	11	28	4
Future Vol, veh/h	4	10	4	11	28	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	11	4	12	31	4

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	53	33	35	0	-	0
Stage 1	33	-	-	-	-	-
Stage 2	20	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	955	1041	1576	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	1003	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	952	1041	1576	-	-	-
Mov Cap-2 Maneuver	952	-	-	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	1003	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	1.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1576	-	1014	-	-
HCM Lane V/C Ratio	0.003	-	0.015	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			L		T
Traffic Vol, veh/h	4	9	25	36	13	4
Future Vol, veh/h	4	9	25	36	13	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	10	28	40	14	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	112	16	18	0	0
Stage 1	16	-	-	-	-
Stage 2	96	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	885	1063	1599	-	-
Stage 1	1007	-	-	-	-
Stage 2	928	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	869	1063	1599	-	-
Mov Cap-2 Maneuver	869	-	-	-	-
Stage 1	989	-	-	-	-
Stage 2	928	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1599	-	995	-	-
HCM Lane V/C Ratio	0.017	-	0.015	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	4	36	17	22	47	4
Future Vol, veh/h	4	36	17	22	47	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	40	19	24	52	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	116	54	56	0	0
Stage 1	54	-	-	-	-
Stage 2	62	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	880	1013	1549	-	-
Stage 1	969	-	-	-	-
Stage 2	961	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	869	1013	1549	-	-
Mov Cap-2 Maneuver	869	-	-	-	-
Stage 1	957	-	-	-	-
Stage 2	961	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	3.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1549	-	996	-	-
HCM Lane V/C Ratio	0.012	-	0.045	-	-
HCM Control Delay (s)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	4	23	62	58	21	4
Future Vol, veh/h	4	23	62	58	21	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	26	69	64	23	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	227	25	27	0	0
Stage 1	25	-	-	-	-
Stage 2	202	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	761	1051	1587	-	-
Stage 1	998	-	-	-	-
Stage 2	832	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	727	1051	1587	-	-
Mov Cap-2 Maneuver	727	-	-	-	-
Stage 1	953	-	-	-	-
Stage 2	832	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	3.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1587	-	986	-	-
HCM Lane V/C Ratio	0.043	-	0.03	-	-
HCM Control Delay (s)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	4	77	44	37	72	4
Future Vol, veh/h	4	77	44	37	72	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	86	49	41	80	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	221	82	84	0	0
Stage 1	82	-	-	-	-
Stage 2	139	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	767	978	1513	-	-
Stage 1	941	-	-	-	-
Stage 2	888	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	742	978	1513	-	-
Mov Cap-2 Maneuver	742	-	-	-	-
Stage 1	910	-	-	-	-
Stage 2	888	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	4.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1513	-	963	-	-
HCM Lane V/C Ratio	0.032	-	0.093	-	-
HCM Control Delay (s)	7.5	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

*APPENDIX E: CAPACITY ANALYSIS RESULTS – NC 96 +
TEMPLE-JOHNSON ROAD*

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	4	4	285	4	4	104
Future Vol, veh/h	4	4	285	4	4	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	317	4	4	116

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	443	319	0	0	321	0
Stage 1	319	-	-	-	-	-
Stage 2	124	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	572	722	-	-	1239	-
Stage 1	737	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	570	722	-	-	1239	-
Mov Cap-2 Maneuver	570	-	-	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	899	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	637	1239
HCM Lane V/C Ratio	-	-	0.014	0.004
HCM Control Delay (s)	-	-	10.7	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	FF		FB			FB
Traffic Vol, veh/h	4	8	224	4	11	339
Future Vol, veh/h	4	8	224	4	11	339
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	9	249	4	12	377

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	652	251	0	0	253	0
Stage 1	251	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	433	788	-	-	1312	-
Stage 1	791	-	-	-	-	-
Stage 2	676	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	428	788	-	-	1312	-
Mov Cap-2 Maneuver	428	-	-	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	668	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	615	1312
HCM Lane V/C Ratio	-	-	0.022	0.009
HCM Control Delay (s)	-	-	11	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	4	25	370	4	8	134
Future Vol, veh/h	4	25	370	4	8	134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	28	411	4	9	149

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	580	413	0	0	415
Stage 1	413	-	-	-	-
Stage 2	167	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	477	639	-	-	1144
Stage 1	668	-	-	-	-
Stage 2	863	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	473	639	-	-	1144
Mov Cap-2 Maneuver	473	-	-	-	-
Stage 1	668	-	-	-	-
Stage 2	855	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	609	1144
HCM Lane V/C Ratio	-	-	0.053	0.008
HCM Control Delay (s)	-	-	11.2	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	4	23	286	4	37	437
Future Vol, veh/h	4	23	286	4	37	437
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	26	318	4	41	486

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	888	320	0	0	322	0
Stage 1	320	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	314	721	-	-	1238	-
Stage 1	736	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	300	721	-	-	1238	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	541	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	597	1238
HCM Lane V/C Ratio	-	-	0.05	0.033
HCM Control Delay (s)	-	-	11.3	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	4	62	393	4	22	142
Future Vol, veh/h	4	62	393	4	22	142
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	69	437	4	24	158

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	645	439	0	0	441	0
Stage 1	439	-	-	-	-	-
Stage 2	206	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	437	618	-	-	1119	-
Stage 1	650	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	427	618	-	-	1119	-
Mov Cap-2 Maneuver	427	-	-	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	809	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	1.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	602	1119
HCM Lane V/C Ratio	-	-	0.122	0.022
HCM Control Delay (s)	-	-	11.8	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	4	50	302	4	78	462
Future Vol, veh/h	4	50	302	4	78	462
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	56	336	4	87	513

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1025	338	0	0	340
Stage 1	338	-	-	-	-
Stage 2	687	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	260	704	-	-	1219
Stage 1	722	-	-	-	-
Stage 2	499	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	234	704	-	-	1219
Mov Cap-2 Maneuver	234	-	-	-	-
Stage 1	722	-	-	-	-
Stage 2	449	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	1.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	613	1219
HCM Lane V/C Ratio	-	-	0.098	0.071
HCM Control Delay (s)	-	-	11.5	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0.2

*APPENDIX F: CAPACITY ANALYSIS RESULTS – NC 96 +
PERRY CURTIS ROAD*

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T		T
Traffic Vol, veh/h	4	72	214	4	11	93
Future Vol, veh/h	4	72	214	4	11	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	80	238	4	12	103

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	367	240	0	0	242	0
Stage 1	240	-	-	-	-	-
Stage 2	127	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	633	799	-	-	1324	-
Stage 1	800	-	-	-	-	-
Stage 2	899	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	627	799	-	-	1324	-
Mov Cap-2 Maneuver	627	-	-	-	-	-
Stage 1	800	-	-	-	-	-
Stage 2	890	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	788	1324
HCM Lane V/C Ratio	-	-	0.107	0.009
HCM Control Delay (s)	-	-	10.1	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T			T
Traffic Vol, veh/h	5	54	171	6	89	252
Future Vol, veh/h	5	54	171	6	89	252
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	60	190	7	99	280

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	672	194	0	0	197	0
Stage 1	194	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	421	847	-	-	1376	-
Stage 1	839	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	385	847	-	-	1376	-
Mov Cap-2 Maneuver	385	-	-	-	-	-
Stage 1	839	-	-	-	-	-
Stage 2	571	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	769	1376
HCM Lane V/C Ratio	-	-	0.085	0.072
HCM Control Delay (s)	-	-	10.1	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0.2

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	16	123	248	6	26	108
Future Vol, veh/h	16	123	248	6	26	108
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	137	276	7	29	120

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	458	280	0	0	283	0
Stage 1	280	-	-	-	-	-
Stage 2	178	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	561	759	-	-	1279	-
Stage 1	767	-	-	-	-	-
Stage 2	853	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	548	759	-	-	1279	-
Mov Cap-2 Maneuver	548	-	-	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	833	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	727	1279
HCM Lane V/C Ratio	-	-	0.212	0.023
HCM Control Delay (s)	-	-	11.3	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.8	0.1

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	15	89	198	22	147	292
Future Vol, veh/h	15	89	198	22	147	292
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	99	220	24	163	324

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	882	232	0	0	244
Stage 1	232	-	-	-	-
Stage 2	650	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	317	807	-	-	1322
Stage 1	807	-	-	-	-
Stage 2	520	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	269	807	-	-	1322
Mov Cap-2 Maneuver	269	-	-	-	-
Stage 1	807	-	-	-	-
Stage 2	442	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	2.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	626	1322
HCM Lane V/C Ratio	-	-	0.185	0.124
HCM Control Delay (s)	-	-	12	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.4

Intersection						
Int Delay, s/veh	4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	146	248	9	34	108
Future Vol, veh/h	23	146	248	9	34	108
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	162	276	10	38	120

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	477	281	0	0	286
Stage 1	281	-	-	-	-
Stage 2	196	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	547	758	-	-	1276
Stage 1	767	-	-	-	-
Stage 2	837	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	529	758	-	-	1276
Mov Cap-2 Maneuver	529	-	-	-	-
Stage 1	767	-	-	-	-
Stage 2	810	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	1.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	716	1276
HCM Lane V/C Ratio	-	-	0.262	0.03
HCM Control Delay (s)	-	-	11.8	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.1	0.1

Intersection						
Int Delay, s/veh	3.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	105	198	30	172	292
Future Vol, veh/h	20	105	198	30	172	292
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	117	220	33	191	324

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	943	237	0	0	253
Stage 1	237	-	-	-	-
Stage 2	706	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	291	802	-	-	1312
Stage 1	802	-	-	-	-
Stage 2	489	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	239	802	-	-	1312
Mov Cap-2 Maneuver	239	-	-	-	-
Stage 1	802	-	-	-	-
Stage 2	402	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	582	1312
HCM Lane V/C Ratio	-	-	0.239	0.146
HCM Control Delay (s)	-	-	13.1	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0.5

*APPENDIX G: CAPACITY ANALYSIS RESULTS – PERRY
CURTIS ROAD + PERRY RIDGE COURT*

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	4	4	58	4	4	14
Future Vol, veh/h	4	4	58	4	4	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	64	4	4	16

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	90	66	0	0	68
Stage 1	66	-	-	-	-
Stage 2	24	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	910	998	-	-	1533
Stage 1	957	-	-	-	-
Stage 2	999	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	907	998	-	-	1533
Mov Cap-2 Maneuver	907	-	-	-	-
Stage 1	957	-	-	-	-
Stage 2	996	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	1.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	950	1533
HCM Lane V/C Ratio	-	-	0.009	0.003
HCM Control Delay (s)	-	-	8.8	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	4	5	39	4	5	64
Future Vol, veh/h	4	5	39	4	5	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	6	43	4	6	71

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	128	45	0	0	47
Stage 1	45	-	-	-	-
Stage 2	83	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	866	1025	-	-	1560
Stage 1	977	-	-	-	-
Stage 2	940	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	863	1025	-	-	1560
Mov Cap-2 Maneuver	863	-	-	-	-
Stage 1	977	-	-	-	-
Stage 2	936	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	946	1560
HCM Lane V/C Ratio	-	-	0.011	0.004
HCM Control Delay (s)	-	-	8.8	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	4	4	120	4	4	33
Future Vol, veh/h	4	4	120	4	4	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	133	4	4	37

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	180	135	0	0	137	0
Stage 1	135	-	-	-	-	-
Stage 2	45	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	810	914	-	-	1447	-
Stage 1	891	-	-	-	-	-
Stage 2	977	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	808	914	-	-	1447	-
Mov Cap-2 Maneuver	808	-	-	-	-	-
Stage 1	891	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	858	1447
HCM Lane V/C Ratio	-	-	0.01	0.003
HCM Control Delay (s)	-	-	9.2	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	6	80	4	6	133
Future Vol, veh/h	4	6	80	4	6	133
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	7	89	4	7	148

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	253	91	0	0	93
Stage 1	91	-	-	-	-
Stage 2	162	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	736	967	-	-	1501
Stage 1	933	-	-	-	-
Stage 2	867	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	732	967	-	-	1501
Mov Cap-2 Maneuver	732	-	-	-	-
Stage 1	933	-	-	-	-
Stage 2	863	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	857	1501
HCM Lane V/C Ratio	-	-	0.013	0.004
HCM Control Delay (s)	-	-	9.3	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	32	120	4	12	33
Future Vol, veh/h	8	32	120	4	12	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	36	133	4	13	37

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	198	135	0	0	137
Stage 1	135	-	-	-	-
Stage 2	63	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	791	914	-	-	1447
Stage 1	891	-	-	-	-
Stage 2	960	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	784	914	-	-	1447
Mov Cap-2 Maneuver	784	-	-	-	-
Stage 1	891	-	-	-	-
Stage 2	951	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	885	1447
HCM Lane V/C Ratio	-	-	0.05	0.009
HCM Control Delay (s)	-	-	9.3	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	27	80	8	39	133
Future Vol, veh/h	5	27	80	8	39	133
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	30	89	9	43	148

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	328	94	0	0	98
Stage 1	94	-	-	-	-
Stage 2	234	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	666	963	-	-	1495
Stage 1	930	-	-	-	-
Stage 2	805	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	645	963	-	-	1495
Mov Cap-2 Maneuver	645	-	-	-	-
Stage 1	930	-	-	-	-
Stage 2	780	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	1.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	894	1495
HCM Lane V/C Ratio	-	-	0.04	0.029
HCM Control Delay (s)	-	-	9.2	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

*APPENDIX H: CAPACITY ANALYSIS RESULTS – PERRY
RIDGE COURT + RIDGE VALLEY WAY*

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	4	4	4	4	4	4
Future Vol, veh/h	4	4	4	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	4	4	4	4

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	8	0	-	0	18
Stage 1	-	-	-	-	6
Stage 2	-	-	-	-	12
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1612	-	-	-	1000
Stage 1	-	-	-	-	1017
Stage 2	-	-	-	-	1011
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1612	-	-	-	998
Mov Cap-2 Maneuver	-	-	-	-	998
Stage 1	-	-	-	-	1015
Stage 2	-	-	-	-	1011

Approach	EB	WB	SB
HCM Control Delay, s	3.6	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1612	-	-	-	1036
HCM Lane V/C Ratio	0.003	-	-	-	0.009
HCM Control Delay (s)	7.2	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	4	5	5	4	4	4
Future Vol, veh/h	4	5	5	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	6	6	4	4	4

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	10	0	-	0	22
Stage 1	-	-	-	-	8
Stage 2	-	-	-	-	14
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1610	-	-	-	995
Stage 1	-	-	-	-	1015
Stage 2	-	-	-	-	1009
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1610	-	-	-	993
Mov Cap-2 Maneuver	-	-	-	-	993
Stage 1	-	-	-	-	1013
Stage 2	-	-	-	-	1009

Approach	EB	WB	SB
HCM Control Delay, s	3.2	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1610	-	-	-	1032
HCM Lane V/C Ratio	0.003	-	-	-	0.009
HCM Control Delay (s)	7.2	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	4	4	4	4	4	4
Future Vol, veh/h	4	4	4	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	4	4	4	4

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	8	0	-	0	18
Stage 1	-	-	-	-	6
Stage 2	-	-	-	-	12
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1612	-	-	-	1000
Stage 1	-	-	-	-	1017
Stage 2	-	-	-	-	1011
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1612	-	-	-	998
Mov Cap-2 Maneuver	-	-	-	-	998
Stage 1	-	-	-	-	1015
Stage 2	-	-	-	-	1011

Approach	EB	WB	SB
HCM Control Delay, s	3.6	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1612	-	-	-	1036
HCM Lane V/C Ratio	0.003	-	-	-	0.009
HCM Control Delay (s)	7.2	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	4	6	6	4	4	4
Future Vol, veh/h	4	6	6	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	7	7	4	4	4

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	11	0	-	0	24
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	15
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1608	-	-	-	992
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	1008
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1608	-	-	-	990
Mov Cap-2 Maneuver	-	-	-	-	990
Stage 1	-	-	-	-	1012
Stage 2	-	-	-	-	1008

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1030
HCM Lane V/C Ratio	0.003	-	-	-	0.009
HCM Control Delay (s)	7.2	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	6.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	14	4	4	4	4	37
Future Vol, veh/h	14	4	4	4	4	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	4	4	4	4	41

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	8	0	-	0	42
Stage 1	-	-	-	-	6
Stage 2	-	-	-	-	36
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1612	-	-	-	969
Stage 1	-	-	-	-	1017
Stage 2	-	-	-	-	986
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1612	-	-	-	959
Mov Cap-2 Maneuver	-	-	-	-	959
Stage 1	-	-	-	-	1007
Stage 2	-	-	-	-	986

Approach	EB	WB	SB
HCM Control Delay, s	5.6	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1612	-	-	-	1064
HCM Lane V/C Ratio	0.01	-	-	-	0.043
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection						
Int Delay, s/veh	6.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	41	6	6	4	4	26
Future Vol, veh/h	41	6	6	4	4	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	7	7	4	4	29

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	11	0	-	0	108
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	99
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1608	-	-	-	889
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	925
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1608	-	-	-	863
Mov Cap-2 Maneuver	-	-	-	-	863
Stage 1	-	-	-	-	985
Stage 2	-	-	-	-	925

Approach	EB	WB	SB
HCM Control Delay, s	6.4	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1039
HCM Lane V/C Ratio	0.028	-	-	-	0.032
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

*APPENDIX I: CAPACITY ANALYSIS RESULTS – PERRY
CURTIS ROAD/WAKE COUNTY LINE ROAD +
CHAMBLEE ROAD*

Intersection

Int Delay, s/veh 1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	4	16	28	9	6	4
Future Vol, veh/h	4	16	28	9	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	18	31	10	7	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	41	0	62
Stage 1	-	-	36
Stage 2	-	-	26
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1568	-	944
Stage 1	-	-	986
Stage 2	-	-	997
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1568	-	941
Mov Cap-2 Maneuver	-	-	941
Stage 1	-	-	983
Stage 2	-	-	997

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1568	-	-	-	977
HCM Lane V/C Ratio	0.003	-	-	-	0.011
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	4	51	26	12	15	5
Future Vol, veh/h	4	51	26	12	15	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	57	29	13	17	6

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	42	0	-	0	101 36
Stage 1	-	-	-	-	36 -
Stage 2	-	-	-	-	65 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1567	-	-	-	898 1037
Stage 1	-	-	-	-	986 -
Stage 2	-	-	-	-	958 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1567	-	-	-	895 1037
Mov Cap-2 Maneuver	-	-	-	-	895 -
Stage 1	-	-	-	-	983 -
Stage 2	-	-	-	-	958 -

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1567	-	-	-	927
HCM Lane V/C Ratio	0.003	-	-	-	0.024
HCM Control Delay (s)	7.3	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection

Int Delay, s/veh 5.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	22	19	32	16	25	54
Future Vol, veh/h	22	19	32	16	25	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	21	36	18	28	60

Major/Minor

	Major1	Major2	Minor2		
Conflicting Flow All	54	0	0	114	45
Stage 1	-	-	-	45	-
Stage 2	-	-	-	69	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1551	-	-	882	1025
Stage 1	-	-	-	977	-
Stage 2	-	-	-	954	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1551	-	-	868	1025
Mov Cap-2 Maneuver	-	-	-	868	-
Stage 1	-	-	-	961	-
Stage 2	-	-	-	954	-

Approach

	EB	WB	SB
HCM Control Delay, s	3.9	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1551	-	-	-	970
HCM Lane V/C Ratio	0.016	-	-	-	0.09
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	64	59	30	33	28	41
Future Vol, veh/h	64	59	30	33	28	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	66	33	37	31	46

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	70	0	-	0	260 52
Stage 1	-	-	-	-	52 -
Stage 2	-	-	-	-	208 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1531	-	-	-	729 1016
Stage 1	-	-	-	-	970 -
Stage 2	-	-	-	-	827 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1531	-	-	-	694 1016
Mov Cap-2 Maneuver	-	-	-	-	694 -
Stage 1	-	-	-	-	923 -
Stage 2	-	-	-	-	827 -

Approach	EB	WB	SB
HCM Control Delay, s	3.9	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1531	-	-	-	855
HCM Lane V/C Ratio	0.046	-	-	-	0.09
HCM Control Delay (s)	7.5	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection						
Int Delay, s/veh	5.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	22	26	35	35	77	54
Future Vol, veh/h	22	26	35	35	77	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	29	39	39	86	60

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	78	0	-	0	136 59
Stage 1	-	-	-	-	59 -
Stage 2	-	-	-	-	77 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1520	-	-	-	857 1007
Stage 1	-	-	-	-	964 -
Stage 2	-	-	-	-	946 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1520	-	-	-	843 1007
Mov Cap-2 Maneuver	-	-	-	-	843 -
Stage 1	-	-	-	-	949 -
Stage 2	-	-	-	-	946 -

Approach	EB	WB	SB
HCM Control Delay, s	3.4	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	904
HCM Lane V/C Ratio	0.016	-	-	-	0.161
HCM Control Delay (s)	7.4	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Intersection						
Int Delay, s/veh	4.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	64	64	38	90	63	41
Future Vol, veh/h	64	64	38	90	63	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	71	42	100	70	46

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	142	0	-	0	305 92
Stage 1	-	-	-	-	92 -
Stage 2	-	-	-	-	213 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1441	-	-	-	687 965
Stage 1	-	-	-	-	932 -
Stage 2	-	-	-	-	823 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1441	-	-	-	652 965
Mov Cap-2 Maneuver	-	-	-	-	652 -
Stage 1	-	-	-	-	884 -
Stage 2	-	-	-	-	823 -

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1441	-	-	-	748
HCM Lane V/C Ratio	0.049	-	-	-	0.154
HCM Control Delay (s)	7.6	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5

*APPENDIX J: CAPACITY ANALYSIS RESULTS – NC 39 +
WAKE COUNTY LINE ROAD*

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	12	8	32	363	123	6
Future Vol, veh/h	12	8	32	363	123	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	9	36	403	137	7

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	616	141	144	0	0
Stage 1	141	-	-	-	-
Stage 2	475	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	454	907	1438	-	-
Stage 1	886	-	-	-	-
Stage 2	626	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	439	907	1438	-	-
Mov Cap-2 Maneuver	439	-	-	-	-
Stage 1	858	-	-	-	-
Stage 2	626	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1438	-	553	-	-
HCM Lane V/C Ratio	0.025	-	0.04	-	-
HCM Control Delay (s)	7.6	0	11.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	40	27	269	309	16
Future Vol, veh/h	20	40	27	269	309	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	44	30	299	343	18

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	711	352	361	0	-	0
Stage 1	352	-	-	-	-	-
Stage 2	359	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	400	692	1198	-	-	-
Stage 1	712	-	-	-	-	-
Stage 2	707	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	388	692	1198	-	-	-
Mov Cap-2 Maneuver	388	-	-	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	707	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1198	-	549	-	-
HCM Lane V/C Ratio	0.025	-	0.121	-	-
HCM Control Delay (s)	8.1	0	12.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	14	27	43	427	161	7
Future Vol, veh/h	14	27	43	427	161	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	30	48	474	179	8

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	753	183	187	0	0
Stage 1	183	-	-	-	-
Stage 2	570	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	377	859	1387	-	-
Stage 1	848	-	-	-	-
Stage 2	566	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	359	859	1387	-	-
Mov Cap-2 Maneuver	359	-	-	-	-
Stage 1	808	-	-	-	-
Stage 2	566	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1387	-	582	-	-
HCM Lane V/C Ratio	0.034	-	0.078	-	-
HCM Control Delay (s)	7.7	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	23	57	50	331	369	19
Future Vol, veh/h	23	57	50	331	369	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	63	56	368	410	21

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	901	421	431	0	0
Stage 1	421	-	-	-	-
Stage 2	480	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	309	632	1129	-	-
Stage 1	662	-	-	-	-
Stage 2	622	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	290	632	1129	-	-
Mov Cap-2 Maneuver	290	-	-	-	-
Stage 1	621	-	-	-	-
Stage 2	622	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1129	-	472	-	-
HCM Lane V/C Ratio	0.049	-	0.188	-	-
HCM Control Delay (s)	8.4	0	14.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	73	27	43	427	161	29
Future Vol, veh/h	73	27	43	427	161	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	81	30	48	474	179	32

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	765	195	211	0	-	0
Stage 1	195	-	-	-	-	-
Stage 2	570	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	371	846	1360	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	353	846	1360	-	-	-
Mov Cap-2 Maneuver	353	-	-	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	566	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.7	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1360	-	419	-	-
HCM Lane V/C Ratio	0.035	-	0.265	-	-
HCM Control Delay (s)	7.7	0	16.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-

Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	63	57	50	331	369	84
Future Vol, veh/h	63	57	50	331	369	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	63	56	368	410	93

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	937	457	503	0	-	0
Stage 1	457	-	-	-	-	-
Stage 2	480	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	294	604	1061	-	-	-
Stage 1	638	-	-	-	-	-
Stage 2	622	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	275	604	1061	-	-	-
Mov Cap-2 Maneuver	275	-	-	-	-	-
Stage 1	596	-	-	-	-	-
Stage 2	622	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1061	-	371	-	-
HCM Lane V/C Ratio	0.052	-	0.359	-	-
HCM Control Delay (s)	8.6	0	20	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.6	-	-

*APPENDIX K: CAPACITY ANALYSIS RESULTS – NC 39 +
OLD US 264*

Intersection												
Int Delay, s/veh	7.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	4	26	22	9	75	148	33	293	15	81	120	9
Future Vol, veh/h	4	26	22	9	75	148	33	293	15	81	120	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	29	24	10	83	164	37	326	17	90	133	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	850	735	138	754	732	335	143	0	0	343	0	0
Stage 1	318	318	-	409	409	-	-	-	-	-	-	-
Stage 2	532	417	-	345	323	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	280	347	910	326	348	707	1440	-	-	1216	-	-
Stage 1	693	654	-	619	596	-	-	-	-	-	-	-
Stage 2	531	591	-	671	650	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	159	313	910	273	314	707	1440	-	-	1216	-	-
Mov Cap-2 Maneuver	159	313	-	273	314	-	-	-	-	-	-	-
Stage 1	675	606	-	603	581	-	-	-	-	-	-	-
Stage 2	340	576	-	576	602	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.7		20.7		0.7		3.2	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1440	-	-	393	482	1216	-
HCM Lane V/C Ratio	0.025	-	-	0.147	0.535	0.074	-
HCM Control Delay (s)	7.6	-	-	15.7	20.7	8.2	-
HCM Lane LOS	A	-	-	C	C	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	3.1	0.2	-

Intersection												
Int Delay, s/veh	20.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	21	105	69	9	64	94	47	164	15	161	291	16
Future Vol, veh/h	21	105	69	9	64	94	47	164	15	161	291	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	117	77	10	71	104	52	182	17	179	323	18

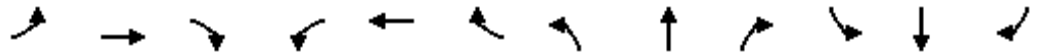
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1072	993	332	1082	994	191	341	0	0	199	0	0
Stage 1	690	690	-	295	295	-	-	-	-	-	-	-
Stage 2	382	303	-	787	699	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	198	245	710	195	245	851	1218	-	-	1373	-	-
Stage 1	435	446	-	713	669	-	-	-	-	-	-	-
Stage 2	640	664	-	385	442	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	111	204	710	84	204	851	1218	-	-	1373	-	-
Mov Cap-2 Maneuver	111	204	-	84	204	-	-	-	-	-	-	-
Stage 1	416	388	-	682	640	-	-	-	-	-	-	-
Stage 2	478	635	-	209	385	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	76.3		31.8		1.7		2.8	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1218	-	-	243	314	1373	-
HCM Lane V/C Ratio	0.043	-	-	0.892	0.591	0.13	-
HCM Control Delay (s)	8.1	-	-	76.3	31.8	8	-
HCM Lane LOS	A	-	-	F	D	A	-
HCM 95th %tile Q(veh)	0.1	-	-	7.5	3.5	0.4	-

Lanes, Volumes, Timings
8: NC 39 & Old US 264

No-BuildAM.syn
10/27/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	30	32	16	87	172	56	535	35	94	203	10
Future Volume (vph)	5	30	32	16	87	172	56	535	35	94	203	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		125	50		125	100		0	50		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.991			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1846	0	1770	1850	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1846	0	1770	1850	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			55				55
Link Distance (ft)		1272			1346			8116				1238
Travel Time (s)		15.8			16.7			100.6				15.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	33	36	18	97	191	62	594	39	104	226	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	33	36	18	97	191	62	633	0	104	237	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						

Lanes, Volumes, Timings
8: NC 39 & Old US 264

No-BuildAM.syn
10/27/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0		7.0	14.0	
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0		14.0	21.0	
Total Split (s)	14.0	28.0	28.0	14.0	28.0	28.0	14.0	61.0		17.0	64.0	
Total Split (%)	11.7%	23.3%	23.3%	11.7%	23.3%	23.3%	11.7%	50.8%		14.2%	53.3%	
Maximum Green (s)	7.0	21.0	21.0	7.0	21.0	21.0	7.0	54.0		10.0	57.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Act Effect Green (s)	10.1	14.1	14.1	10.1	18.7	18.7	10.1	37.4		12.1	39.4	
Actuated g/C Ratio	0.12	0.17	0.17	0.12	0.23	0.23	0.12	0.46		0.15	0.48	
v/c Ratio	0.03	0.10	0.13	0.08	0.23	0.53	0.28	0.75		0.40	0.27	
Control Delay	45.4	36.7	37.2	45.1	33.6	39.4	46.5	27.2		45.6	15.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	45.4	36.7	37.2	45.1	33.6	39.4	46.5	27.2		45.6	15.4	
LOS	D	D	D	D	C	D	D	C		D	B	
Approach Delay		37.7			37.9			28.9			24.6	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	3	13	15	8	41	86	29	260		48	68	
Queue Length 95th (ft)	18	51	54	38	116	219	94	537		138	158	
Internal Link Dist (ft)		1192			1266			8036			1158	
Turn Bay Length (ft)	50		125	50		125	100			50		
Base Capacity (vph)	219	591	502	219	598	508	219	1311		293	1364	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.03	0.06	0.07	0.08	0.16	0.38	0.28	0.48		0.35	0.17	

Intersection Summary

























Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 81.7
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 30.3
 Intersection LOS: C
 Intersection Capacity Utilization 59.3%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 8: NC 39 & Old US 264



Lanes, Volumes, Timings
8: NC 39 & Old US 264

No-BuildPM.syn
10/27/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	122	99	29	74	109	65	315	29	187	551	19
Future Volume (vph)	24	122	99	29	74	109	65	315	29	187	551	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		125	50		125	150		0	100		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr			0.850			0.850		0.987			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1839	0	1770	1853	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1839	0	1770	1853	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		1272			1346			8116			1238	
Travel Time (s)		15.8			16.7			100.6			15.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	136	110	32	82	121	72	350	32	208	612	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	136	110	32	82	121	72	382	0	208	633	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						

Lanes, Volumes, Timings
8: NC 39 & Old US 264

No-BuildPM.syn
10/27/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0		7.0	14.0	
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0		14.0	21.0	
Total Split (s)	14.0	23.0	23.0	14.0	23.0	23.0	15.0	53.0		30.0	68.0	
Total Split (%)	11.7%	19.2%	19.2%	11.7%	19.2%	19.2%	12.5%	44.2%		25.0%	56.7%	
Maximum Green (s)	7.0	16.0	16.0	7.0	16.0	16.0	8.0	46.0		23.0	61.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Act Effect Green (s)	9.9	14.1	14.1	9.9	16.6	16.6	10.5	29.0		17.7	41.0	
Actuated g/C Ratio	0.12	0.17	0.17	0.12	0.20	0.20	0.12	0.34		0.21	0.49	
v/c Ratio	0.13	0.44	0.42	0.15	0.22	0.39	0.33	0.60		0.56	0.70	
Control Delay	46.0	42.4	43.3	46.1	36.5	39.7	47.3	29.5		40.5	25.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	46.0	42.4	43.3	46.1	36.5	39.7	47.3	29.5		40.5	25.0	
LOS	D	D	D	D	D	D	D	C		D	C	
Approach Delay		43.1			39.5			32.3			28.8	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	15	74	60	18	35	53	40	185		112	315	
Queue Length 95th (ft)	49	156	132	55	101	144	100	321		215	476	
Internal Link Dist (ft)		1192			1266			8036			1158	
Turn Bay Length (ft)	50		125	50		125	150			100		
Base Capacity (vph)	207	437	372	207	478	406	231	1152		577	1426	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.13	0.31	0.30	0.15	0.17	0.30	0.31	0.33		0.36	0.44	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 84.3
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 33.2
 Intersection LOS: C
 Intersection Capacity Utilization 64.9%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 8: NC 39 & Old US 264



Lanes, Volumes, Timings
8: NC 39 & Old US 264

BuildAM.syn
10/31/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	30	32	16	87	172	56	594	35	94	225	10
Future Volume (vph)	5	30	32	16	87	172	56	594	35	94	225	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		125	50		125	150		0	100		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.992			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1848	0	1770	1852	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1848	0	1770	1852	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			55				55
Link Distance (ft)		1272			1346			8116				1238
Travel Time (s)		15.8			16.7			100.6				15.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	33	36	18	97	191	62	660	39	104	250	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	33	36	18	97	191	62	699	0	104	261	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						

Lanes, Volumes, Timings
8: NC 39 & Old US 264



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0		7.0	14.0	
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0		14.0	21.0	
Total Split (s)	14.0	28.0	28.0	14.0	28.0	28.0	14.0	61.0		17.0	64.0	
Total Split (%)	11.7%	23.3%	23.3%	11.7%	23.3%	23.3%	11.7%	50.8%		14.2%	53.3%	
Maximum Green (s)	7.0	21.0	21.0	7.0	21.0	21.0	7.0	54.0		10.0	57.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Act Effect Green (s)	10.0	15.7	15.7	10.0	19.0	19.0	10.0	41.6		12.0	43.6	
Actuated g/C Ratio	0.12	0.18	0.18	0.12	0.22	0.22	0.12	0.48		0.14	0.51	
v/c Ratio	0.03	0.10	0.12	0.09	0.24	0.55	0.30	0.78		0.42	0.28	
Control Delay	46.8	37.8	38.3	46.8	35.4	41.8	49.0	28.5		48.3	15.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	46.8	37.8	38.3	46.8	35.4	41.8	49.0	28.5		48.3	15.1	
LOS	D	D	D	D	D	D	D	C		D	B	
Approach Delay		38.8			40.1			30.2			24.5	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	3	15	16	9	44	94	32	310		53	78	
Queue Length 95th (ft)	18	51	54	38	116	219	94	624		138	174	
Internal Link Dist (ft)		1192			1266			8036			1158	
Turn Bay Length (ft)	50		125	50		125	150			100		
Base Capacity (vph)	206	554	470	206	561	476	206	1256		274	1306	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.03	0.06	0.08	0.09	0.17	0.40	0.30	0.56		0.38	0.20	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 86.1
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 31.2
 Intersection LOS: C
 Intersection Capacity Utilization 62.4%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 8: NC 39 & Old US 264



Lanes, Volumes, Timings
8: NC 39 & Old US 264

BuildPM.syn
10/31/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	122	99	29	74	109	65	355	29	187	616	19
Future Volume (vph)	24	122	99	29	74	109	65	355	29	187	616	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		125	50		125	150		0	100		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.989			0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1842	0	1770	1855	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1842	0	1770	1855	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		1272			1346			8116			1238	
Travel Time (s)		15.8			16.7			100.6			15.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	136	110	32	82	121	72	394	32	208	684	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	136	110	32	82	121	72	426	0	208	705	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						

Lanes, Volumes, Timings
8: NC 39 & Old US 264



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0		7.0	14.0	
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0		14.0	21.0	
Total Split (s)	14.0	23.0	23.0	14.0	23.0	23.0	15.0	53.0		30.0	68.0	
Total Split (%)	11.7%	19.2%	19.2%	11.7%	19.2%	19.2%	12.5%	44.2%		25.0%	56.7%	
Maximum Green (s)	7.0	16.0	16.0	7.0	16.0	16.0	8.0	46.0		23.0	61.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Act Effect Green (s)	10.0	14.6	14.6	10.0	14.6	14.6	10.6	32.9		18.3	45.5	
Actuated g/C Ratio	0.11	0.16	0.16	0.11	0.16	0.16	0.12	0.37		0.20	0.51	
v/c Ratio	0.14	0.45	0.43	0.16	0.27	0.47	0.34	0.63		0.57	0.75	
Control Delay	49.2	45.6	46.5	49.4	42.5	47.6	51.0	29.6		43.7	26.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	49.2	45.6	46.5	49.4	42.5	47.6	51.0	29.6		43.7	26.0	
LOS	D	D	D	D	D	D	D	C		D	C	
Approach Delay		46.3			46.1			32.7			30.1	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	16	80	64	19	47	71	43	218		121	378	
Queue Length 95th (ft)	51	164	139	57	107	151	104	361		227	556	
Internal Link Dist (ft)		1192			1266			8036			1158	
Turn Bay Length (ft)	50		125	50		125	150			100		
Base Capacity (vph)	197	416	354	197	416	354	219	1098		549	1364	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.14	0.33	0.31	0.16	0.20	0.34	0.33	0.39		0.38	0.52	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 89.3
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 35.0
 Intersection LOS: D
 Intersection Capacity Utilization 68.3%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 8: NC 39 & Old US 264



*APPENDIX L: CAPACITY ANALYSIS RESULTS –
CHAMBLEE ROAD + SITE DRIVE #1*

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↘			↑
Traffic Vol, veh/h	0	9	92	4	0	41
Future Vol, veh/h	0	9	92	4	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	102	4	0	46

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	104	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	951	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	951	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	951
HCM Lane V/C Ratio	-	-	0.011
HCM Control Delay (s)	-	-	8.8
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↘			↑
Traffic Vol, veh/h	0	6	71	4	0	133
Future Vol, veh/h	0	6	71	4	0	133
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	79	4	0	148

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	81	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	979	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	979	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	979
HCM Lane V/C Ratio	-	-	0.007
HCM Control Delay (s)	-	-	8.7
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

*APPENDIX M: CAPACITY ANALYSIS RESULTS –
CHAMBLEE ROAD + SITE DRIVE #2*

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	44	4	21	18	4	4	7	46	6	4	20	17
Future Vol, veh/h	44	4	21	18	4	4	7	46	6	4	20	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	4	23	20	4	4	8	51	7	4	22	19

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	115	114	32	124	120	55	41	0	0	58	0	0
Stage 1	40	40	-	71	71	-	-	-	-	-	-	-
Stage 2	75	74	-	53	49	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	862	776	1042	850	770	1012	1568	-	-	1546	-	-
Stage 1	975	862	-	939	836	-	-	-	-	-	-	-
Stage 2	934	833	-	960	854	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	849	770	1042	822	764	1012	1568	-	-	1546	-	-
Mov Cap-2 Maneuver	849	770	-	822	764	-	-	-	-	-	-	-
Stage 1	970	859	-	934	832	-	-	-	-	-	-	-
Stage 2	920	829	-	931	851	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.4		9.5		0.9		0.7	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1568	-	-	894	836	1546	-
HCM Lane V/C Ratio	0.005	-	-	0.086	0.035	0.003	-
HCM Control Delay (s)	7.3	0	-	9.4	9.5	7.3	0
HCM Lane LOS	A	A	-	A	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	4	14	12	4	4	23	40	16	13	70	50
Future Vol, veh/h	32	4	14	12	4	4	23	40	16	13	70	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	4	16	13	4	4	26	44	18	14	78	56

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	243	248	106	249	267	53	134	0	0	62	0	0
Stage 1	134	134	-	105	105	-	-	-	-	-	-	-
Stage 2	109	114	-	144	162	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	711	655	948	705	639	1014	1451	-	-	1541	-	-
Stage 1	869	785	-	901	808	-	-	-	-	-	-	-
Stage 2	896	801	-	859	764	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	688	636	948	675	620	1014	1451	-	-	1541	-	-
Mov Cap-2 Maneuver	688	636	-	675	620	-	-	-	-	-	-	-
Stage 1	852	777	-	884	793	-	-	-	-	-	-	-
Stage 2	870	786	-	832	756	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.3		10.2		2.2		0.7	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1451	-	-	740	710	1541	-
HCM Lane V/C Ratio	0.018	-	-	0.075	0.031	0.009	-
HCM Control Delay (s)	7.5	0	-	10.3	10.2	7.4	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	0	-

*APPENDIX N: CAPACITY ANALYSIS RESULTS –
CHAMBLEE ROAD + SITE DRIVE #3*

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	13	5	56	58	4
Future Vol, veh/h	4	13	5	56	58	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	14	6	62	64	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	140	66	68	0	0
Stage 1	66	-	-	-	-
Stage 2	74	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	853	998	1533	-	-
Stage 1	957	-	-	-	-
Stage 2	949	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	850	998	1533	-	-
Mov Cap-2 Maneuver	850	-	-	-	-
Stage 1	953	-	-	-	-
Stage 2	949	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1533	-	959	-	-
HCM Lane V/C Ratio	0.004	-	0.02	-	-
HCM Control Delay (s)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	9	15	77	93	4
Future Vol, veh/h	4	9	15	77	93	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	10	17	86	103	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	225	105	107	0	0
Stage 1	105	-	-	-	-
Stage 2	120	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	763	949	1484	-	-
Stage 1	919	-	-	-	-
Stage 2	905	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	754	949	1484	-	-
Mov Cap-2 Maneuver	754	-	-	-	-
Stage 1	908	-	-	-	-
Stage 2	905	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1484	-	879	-	-
HCM Lane V/C Ratio	0.011	-	0.016	-	-
HCM Control Delay (s)	7.5	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

APPENDIX O: SIMTRAFFIC REPORTS

1: Chamblee Road /E. Horton Street & Temple-Johnston Road Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.0
Total Del/Veh (s)	1.6	0.7	0.1	2.2	0.0	0.0	1.3

2: NC 96 & Temple-Johnston Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.8	2.6	0.7	0.2	1.5	0.3	0.6

3: NC 96 & Perry Curtis Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.1	0.0	0.0	0.1
Total Del/Veh (s)	1.4	2.5	0.8	0.2	4.2	0.4	1.1

4: Perry Curtis Road & Perry Ridge Court Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.7	2.7	0.6	0.0	0.1	0.0	0.6

5: Perry Ridge Court & Ridge Valley Way Performance by movement

Movement	EBL	EBT	WBT	WBR	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1	0.1
Total Del/Veh (s)	1.6	0.1	0.0	0.0	2.7	0.6

6: Perry Curtis Road/Wake County Line Road & Chamblee Road Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.1	0.3	0.2	0.0	1.5	0.0	0.7	0.3

7: NC 39 & Wake County Line Road Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.2
Total Del/Veh (s)	3.6	0.0	0.6	1.1	1.4	2.1	10.4	1.6

8: NC 39 & Old US 264 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.2	0.1	0.2	0.2	0.0	0.0	0.0	3.8	0.4	0.1
Total Del/Veh (s)	9.3	12.9	3.5	15.0	15.7	6.1	8.2	7.1	5.6	2.4	1.4	0.7

8: NC 39 & Old US 264 Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	6.7

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	7.1

Intersection: 1: Chamblee Road /E. Horton Street & Temple-Johnston Road

Movement	EB
Directions Served	LR
Maximum Queue (ft)	22
Average Queue (ft)	5
95th Queue (ft)	20
Link Distance (ft)	1057
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: NC 96 & Temple-Johnston Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	30	27
Average Queue (ft)	5	1
95th Queue (ft)	21	9
Link Distance (ft)	1194	1680
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: NC 96 & Perry Curtis Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	20	51
Average Queue (ft)	1	6
95th Queue (ft)	9	27
Link Distance (ft)	1102	1554
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Perry Curtis Road & Perry Ridge Court

Movement	WB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	5
95th Queue (ft)	23
Link Distance (ft)	410
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Perry Ridge Court & Ridge Valley Way

Movement	SB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	2
95th Queue (ft)	15
Link Distance (ft)	998
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Perry Curtis Road/Wake County Line Road & Chamblee Road

Movement	SB
Directions Served	LR
Maximum Queue (ft)	23
Average Queue (ft)	3
95th Queue (ft)	15
Link Distance (ft)	931
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: NC 39 & Wake County Line Road

Movement	NB
Directions Served	LT
Maximum Queue (ft)	31
Average Queue (ft)	5
95th Queue (ft)	21
Link Distance (ft)	1470
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: NC 39 & Old US 264

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	55	64	10	17
Average Queue (ft)	12	36	0	9
95th Queue (ft)	31	65	3	18
Link Distance (ft)	1213	1287		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			150	100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

1: Chamblee Road /E. Horton Street & Temple-Johnston Road Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1
Total Del/Veh (s)	1.6	0.0	0.8	0.1	2.3	0.0	0.0	0.7

2: NC 96 & Temple-Johnston Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.3	0.3	0.2
Total Del/Veh (s)	6.5	3.0	0.7	0.1	1.4	0.8	0.8

3: NC 96 & Perry Curtis Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.1	0.2	0.1	0.0	0.0	0.1
Total Del/Veh (s)	2.4	2.6	0.6	0.4	2.5	2.2	1.8

4: Perry Curtis Road & Perry Ridge Court Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	4.0	2.5	0.4	0.0	0.4	0.5	0.7

5: Perry Ridge Court & Ridge Valley Way Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	1.5	0.1	0.0	0.0	3.6	2.7	1.3

6: Perry Curtis Road/Wake County Line Road & Chamblee Road Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.4	0.7	0.2	0.0	2.4	0.1	1.4	0.6

7: NC 39 & Wake County Line Road Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.1
Total Del/Veh (s)	7.2	0.0	4.7	3.9	1.3	5.6	2.0	3.9

8: NC 39 & Old US 264 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	0.1	0.2	0.1	0.2	0.0	0.0	0.0	3.2	0.6	0.8
Total Del/Veh (s)	13.3	18.5	8.2	8.4	17.5	7.1	5.1	4.9	4.6	2.9	3.5	0.5

8: NC 39 & Old US 264 Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	6.6

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	8.3

Intersection: 1: Chamblee Road /E. Horton Street & Temple-Johnston Road

Movement	EB
Directions Served	LR
Maximum Queue (ft)	22
Average Queue (ft)	7
95th Queue (ft)	24
Link Distance (ft)	1057
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: NC 96 & Temple-Johnston Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	24	27
Average Queue (ft)	3	3
95th Queue (ft)	17	15
Link Distance (ft)	1194	1680
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: NC 96 & Perry Curtis Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	28	72
Average Queue (ft)	4	13
95th Queue (ft)	16	46
Link Distance (ft)	1102	1554
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Perry Curtis Road & Perry Ridge Court

Movement	WB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	10
95th Queue (ft)	33
Link Distance (ft)	410
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Perry Ridge Court & Ridge Valley Way

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	10
95th Queue (ft)	33
Link Distance (ft)	998
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Perry Curtis Road/Wake County Line Road & Chamblee Road

Movement	SB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	8
95th Queue (ft)	26
Link Distance (ft)	931
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: NC 39 & Wake County Line Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	19	93
Average Queue (ft)	3	11
95th Queue (ft)	15	50
Link Distance (ft)	2460	1470
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: NC 39 & Old US 264

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	101	100	30	17	38
Average Queue (ft)	39	32	7	1	11
95th Queue (ft)	77	66	20	6	32
Link Distance (ft)	1213	1287		7984	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			150		100
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 0

1: Chamblee Road /E. Horton Street & Temple-Johnston Road Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	2.1	0.7	0.4	2.6	0.0	0.0	1.5

2: NC 96 & Temple-Johnston Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.2	0.0
Total Del/Veh (s)	3.3	2.6	1.1	0.2	1.2	0.3	1.0

3: NC 96 & Perry Curtis Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.1	0.0	0.0	0.1
Total Del/Veh (s)	7.6	3.4	1.1	0.4	2.1	0.9	1.9

4: Perry Curtis Road & Perry Ridge Court Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.1	3.3	0.4	0.0	0.6	0.1	0.6

5: Perry Ridge Court & Ridge Valley Way Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	1.7	0.2	0.0	0.0	4.0	2.7	1.8

6: Perry Curtis Road/Wake County Line Road & Chamblee Road Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	0.8	0.1	0.2	0.0	2.6	1.5	1.0

7: NC 39 & Wake County Line Road Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.5	0.4	0.0	0.0	0.2
Total Del/Veh (s)	6.1	0.0	1.9	2.6	1.8	5.9	6.0	3.3

8: NC 39 & Old US 264 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.2	0.2	4.1	3.9	0.7	3.6	0.3	0.2	0.1	3.3	0.5	0.8
Total Del/Veh (s)	36.9	34.6	27.6	43.8	28.0	29.9	41.9	27.1	23.1	35.2	15.5	14.6

8: NC 39 & Old US 264 Performance by movement

Movement	All
Denied Del/Veh (s)	1.2
Total Del/Veh (s)	27.3

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	23.3

Intersection: 1: Chamblee Road /E. Horton Street & Temple-Johnston Road

Movement	EB
Directions Served	LR
Maximum Queue (ft)	26
Average Queue (ft)	7
95th Queue (ft)	23
Link Distance (ft)	1057
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: NC 96 & Temple-Johnston Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	30	26
Average Queue (ft)	13	3
95th Queue (ft)	32	15
Link Distance (ft)	1194	1680
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: NC 96 & Perry Curtis Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	40	27
Average Queue (ft)	8	7
95th Queue (ft)	26	26
Link Distance (ft)	1102	1554
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Perry Curtis Road & Perry Ridge Court

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	30	24
Average Queue (ft)	11	1
95th Queue (ft)	34	8
Link Distance (ft)	410	2304
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Perry Ridge Court & Ridge Valley Way

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	10
95th Queue (ft)	33
Link Distance (ft)	998
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Perry Curtis Road/Wake County Line Road & Chamblee Road

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	21	60
Average Queue (ft)	1	27
95th Queue (ft)	7	46
Link Distance (ft)	2550	931
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: NC 39 & Wake County Line Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	18	55
Average Queue (ft)	1	7
95th Queue (ft)	8	33
Link Distance (ft)	2460	1470
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: NC 39 & Old US 264

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	TR	L	TR
Maximum Queue (ft)	17	30	21	35	231	213	199	366	109	160
Average Queue (ft)	4	3	5	8	41	69	37	179	53	68
95th Queue (ft)	13	13	17	24	122	138	93	307	100	145
Link Distance (ft)		1212			1286			7981		1181
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	50		125	50		125	100		50	
Storage Blk Time (%)				0	4	2		19	15	13
Queuing Penalty (veh)				0	8	3		11	33	12

Network Summary

Network wide Queuing Penalty: 67

1: Chamblee Road /E. Horton Street & Temple-Johnston Road Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	2.2	0.2	1.3	1.2	1.0	0.1	0.0	0.8

2: NC 96 & Temple-Johnston Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.2	0.3	0.2
Total Del/Veh (s)	4.3	1.4	0.8	0.4	2.3	1.5	1.3

3: NC 96 & Perry Curtis Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.2	0.0	0.0	0.1
Total Del/Veh (s)	8.8	2.9	1.1	0.3	4.5	3.8	3.1

4: Perry Curtis Road & Perry Ridge Court Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.8	2.5	0.3	0.0	0.2	0.7	0.7

5: Perry Ridge Court & Ridge Valley Way Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	1.0	0.1	0.0	0.0	3.8	2.7	1.1

6: Perry Curtis Road/Wake County Line Road & Chamblee Road Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.6	1.9	0.7	0.0	2.9	0.2	1.2	1.3

7: NC 39 & Wake County Line Road Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.4	0.3	0.0	0.0	0.1
Total Del/Veh (s)	7.6	0.0	5.3	4.6	2.8	11.3	12.8	8.2

8: NC 39 & Old US 264 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.6	0.5	3.6	3.5	0.7	3.8	0.1	0.1	0.0	3.2	0.9	1.0
Total Del/Veh (s)	38.7	35.7	33.9	37.3	28.1	32.7	56.3	29.2	26.4	45.3	27.3	22.1

8: NC 39 & Old US 264 Performance by movement

Movement	All
Denied Del/Veh (s)	1.4
Total Del/Veh (s)	32.4

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	28.8

Intersection: 1: Chamblee Road /E. Horton Street & Temple-Johnston Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	27	25
Average Queue (ft)	16	3
95th Queue (ft)	32	15
Link Distance (ft)	1057	1661
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: NC 96 & Temple-Johnston Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	29	76
Average Queue (ft)	12	10
95th Queue (ft)	31	43
Link Distance (ft)	1194	1680
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: NC 96 & Perry Curtis Road

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	22	22	97
Average Queue (ft)	4	0	35
95th Queue (ft)	18	0	78
Link Distance (ft)	1102	1141	1554
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Perry Curtis Road & Perry Ridge Court

Movement	WB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	13
95th Queue (ft)	36
Link Distance (ft)	410
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Perry Ridge Court & Ridge Valley Way

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	9
95th Queue (ft)	31
Link Distance (ft)	998
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Perry Curtis Road/Wake County Line Road & Chamblee Road

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	29	47
Average Queue (ft)	3	21
95th Queue (ft)	15	39
Link Distance (ft)	2550	931
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: NC 39 & Wake County Line Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	40	74
Average Queue (ft)	6	23
95th Queue (ft)	25	67
Link Distance (ft)	2460	1470
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: NC 39 & Old US 264

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	TR	L	TR
Maximum Queue (ft)	40	137	109	39	106	89	250	261	200	492
Average Queue (ft)	10	56	31	11	22	47	54	130	119	218
95th Queue (ft)	32	114	74	30	63	90	129	214	205	387
Link Distance (ft)		1212			1286			7981		1181
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	50		125	50		125	150		100	
Storage Blk Time (%)	0	17	0	0	1			7	12	25
Queuing Penalty (veh)	0	22	0	0	2			5	68	48

Network Summary

Network wide Queuing Penalty: 144

1: Chamblee Road & Temple-Johnston Road Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	2.8	1.0	0.6	0.7	0.1	0.0	0.7

2: NC 96 & Temple-Johnston Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.2	0.1
Total Del/Veh (s)	3.7	2.2	1.2	1.1	2.2	1.2	1.4

3: NC 96 & Perry Curtis Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.1	0.0	0.0	0.1
Total Del/Veh (s)	7.1	3.7	1.0	0.0	3.5	1.8	2.3

4: Perry Curtis Road & Perry Ridge Court Performance by movement

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.1	0.3	3.2	0.7	0.0	0.8	0.1	1.1

5: Perry Ridge Court & Ridge Valley Way Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	1.8	0.3	0.0	0.0	4.5	2.8	2.3

6: Perry Curtis Road/Wake County Line Road & Chamblee Road Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.5	1.0	0.8	0.0	3.8	2.1	1.9

7: NC 39 & Wake County Line Road Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.4	0.0	0.0	0.2
Total Del/Veh (s)	9.8	0.1	3.4	2.6	2.2	6.5	6.1	4.4

8: NC 39 & Old US 264 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.1	0.1	4.1	3.6	0.7	3.7	0.5	0.2	0.1	3.6	0.5	0.5
Total Del/Veh (s)	34.1	30.8	28.1	43.8	26.2	29.6	43.9	32.1	30.1	39.8	13.0	10.1

8: NC 39 & Old US 264 Performance by movement

Movement	All
Denied Del/Veh (s)	1.2
Total Del/Veh (s)	29.0

9: Chamblee Road & Site Drive #1 Performance by movement

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.2	0.4	0.0	0.2	0.4

10: Chamblee Road & Site Drive #2 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.0	4.1	2.7	4.6	7.8	3.3	0.1	0.4	0.0	0.2	0.2	0.0

10: Chamblee Road & Site Drive #2 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.7

11: Chamblee Road & Site Drive #3 Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.3	0.1	0.0	0.0	0.1
Total Del/Veh (s)	3.6	2.3	0.6	0.3	0.4	0.0	0.5

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	25.3

Intersection: 1: Chamblee Road & Temple-Johnston Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	52	24
Average Queue (ft)	17	2
95th Queue (ft)	40	12
Link Distance (ft)	1057	1661
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: NC 96 & Temple-Johnston Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	51	53
Average Queue (ft)	25	11
95th Queue (ft)	38	38
Link Distance (ft)	1194	1680
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: NC 96 & Perry Curtis Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	83	53
Average Queue (ft)	11	13
95th Queue (ft)	43	43
Link Distance (ft)	1102	1554
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Perry Curtis Road & Perry Ridge Court

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	53	24
Average Queue (ft)	25	1
95th Queue (ft)	47	8
Link Distance (ft)	410	2304
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Perry Ridge Court & Ridge Valley Way

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	29	74
Average Queue (ft)	1	27
95th Queue (ft)	10	53
Link Distance (ft)	410	998
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Perry Curtis Road/Wake County Line Road & Chamblee Road

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	22	73
Average Queue (ft)	1	29
95th Queue (ft)	7	46
Link Distance (ft)	2552	1499
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: NC 39 & Wake County Line Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	38	72
Average Queue (ft)	8	10
95th Queue (ft)	26	44
Link Distance (ft)	2460	1470
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: NC 39 & Old US 264

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	TR	L	TR
Maximum Queue (ft)	35	30	45	56	224	208	250	534	117	130
Average Queue (ft)	2	8	7	5	31	69	41	205	64	61
95th Queue (ft)	13	25	31	23	106	145	113	348	115	111
Link Distance (ft)		1212			1286			7981		1181
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	50		125	50		125	150		100	
Storage Blk Time (%)	0			0	3	2		17	4	1
Queuing Penalty (veh)	0			1	5	2		9	10	1

Intersection: 9: Chamblee Road & Site Drive #1

Movement	WB
Directions Served	R
Maximum Queue (ft)	19
Average Queue (ft)	5
95th Queue (ft)	18
Link Distance (ft)	1016
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Chamblee Road & Site Drive #2

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	43	60
Average Queue (ft)	18	12
95th Queue (ft)	32	31
Link Distance (ft)	1073	1388
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Chamblee Road & Site Drive #3

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	15	23
Average Queue (ft)	7	1
95th Queue (ft)	19	8
Link Distance (ft)	864	1499
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 28

1: Chamblee Road & Temple-Johnston Road Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	3.7	0.0	1.7	0.9	1.0	0.8	0.0	1.2

2: NC 96 & Temple-Johnston Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.5	0.5	0.3
Total Del/Veh (s)	4.7	2.0	1.3	1.3	3.5	2.5	2.2

3: NC 96 & Perry Curtis Road Performance by movement

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	10.6	0.0	3.0	1.6	0.4	5.2	4.2	3.7

4: Perry Curtis Road & Perry Ridge Court Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.2	3.1	0.6	0.0	1.1	1.3	1.2

5: Perry Ridge Court & Ridge Valley Way Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1	0.1	0.0
Total Del/Veh (s)	1.6	0.1	0.0	0.0	3.7	2.7	1.7

6: Perry Curtis Road/Wake County Line Road & Chamblee Road Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.5	2.6	0.8	0.1	3.7	0.2	2.0	1.6

7: NC 39 & Wake County Line Road Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.1
Total Del/Veh (s)	14.2	0.7	9.0	7.9	4.1	13.6	13.3	10.7

8: NC 39 & Old US 264 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.7	0.6	3.8	3.5	0.7	3.8	0.2	0.1	0.1	3.0	1.0	0.8
Total Del/Veh (s)	43.8	35.6	38.2	53.3	35.5	34.6	49.4	31.7	20.3	54.7	32.9	29.3

8: NC 39 & Old US 264 Performance by movement

Movement	All
Denied Del/Veh (s)	1.4
Total Del/Veh (s)	36.5

9: Chamblee Road & Site Drive #1 Performance by movement

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.4	0.4	0.4	0.9	0.7

10: Chamblee Road & Site Drive #2 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.5	4.6	2.5	5.1	5.5	1.6	1.2	0.6	0.0	1.2	1.1	0.1

10: Chamblee Road & Site Drive #2 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.6

11: Chamblee Road & Site Drive #3 Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	9.9	2.3	1.6	0.5	1.0	0.2	0.9

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	32.5

Intersection: 1: Chamblee Road & Temple-Johnston Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	51	25
Average Queue (ft)	23	4
95th Queue (ft)	40	18
Link Distance (ft)	1057	1661
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: NC 96 & Temple-Johnston Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	46	96
Average Queue (ft)	22	25
95th Queue (ft)	40	70
Link Distance (ft)	1194	1680
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: NC 96 & Perry Curtis Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	42	116
Average Queue (ft)	6	34
95th Queue (ft)	25	83
Link Distance (ft)	1102	1554
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Perry Curtis Road & Perry Ridge Court

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	77	26
Average Queue (ft)	19	2
95th Queue (ft)	52	13
Link Distance (ft)	410	2304
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Perry Ridge Court & Ridge Valley Way

Movement	SB
Directions Served	LR
Maximum Queue (ft)	79
Average Queue (ft)	21
95th Queue (ft)	55
Link Distance (ft)	998
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Perry Curtis Road/Wake County Line Road & Chamblee Road

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	28	52
Average Queue (ft)	7	29
95th Queue (ft)	25	42
Link Distance (ft)	2552	1499
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: NC 39 & Wake County Line Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	60	162
Average Queue (ft)	14	34
95th Queue (ft)	42	98
Link Distance (ft)	2460	1470
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: NC 39 & Old US 264

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	TR	L	TR
Maximum Queue (ft)	137	229	150	58	96	148	249	330	200	581
Average Queue (ft)	21	56	44	17	25	50	49	155	134	283
95th Queue (ft)	63	136	110	43	70	119	122	263	221	516
Link Distance (ft)		1212			1286			7981		1181
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	50		125	50		125	150		100	
Storage Blk Time (%)	0	15	1	0	4	1		9	17	30
Queuing Penalty (veh)	0	19	1	1	6	1		6	109	56

Intersection: 9: Chamblee Road & Site Drive #1

Movement	WB
Directions Served	R
Maximum Queue (ft)	19
Average Queue (ft)	3
95th Queue (ft)	13
Link Distance (ft)	1016
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Chamblee Road & Site Drive #2

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	44	39	20	24
Average Queue (ft)	19	11	3	3
95th Queue (ft)	36	26	14	15
Link Distance (ft)	1073	1388	701	235
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Chamblee Road & Site Drive #3

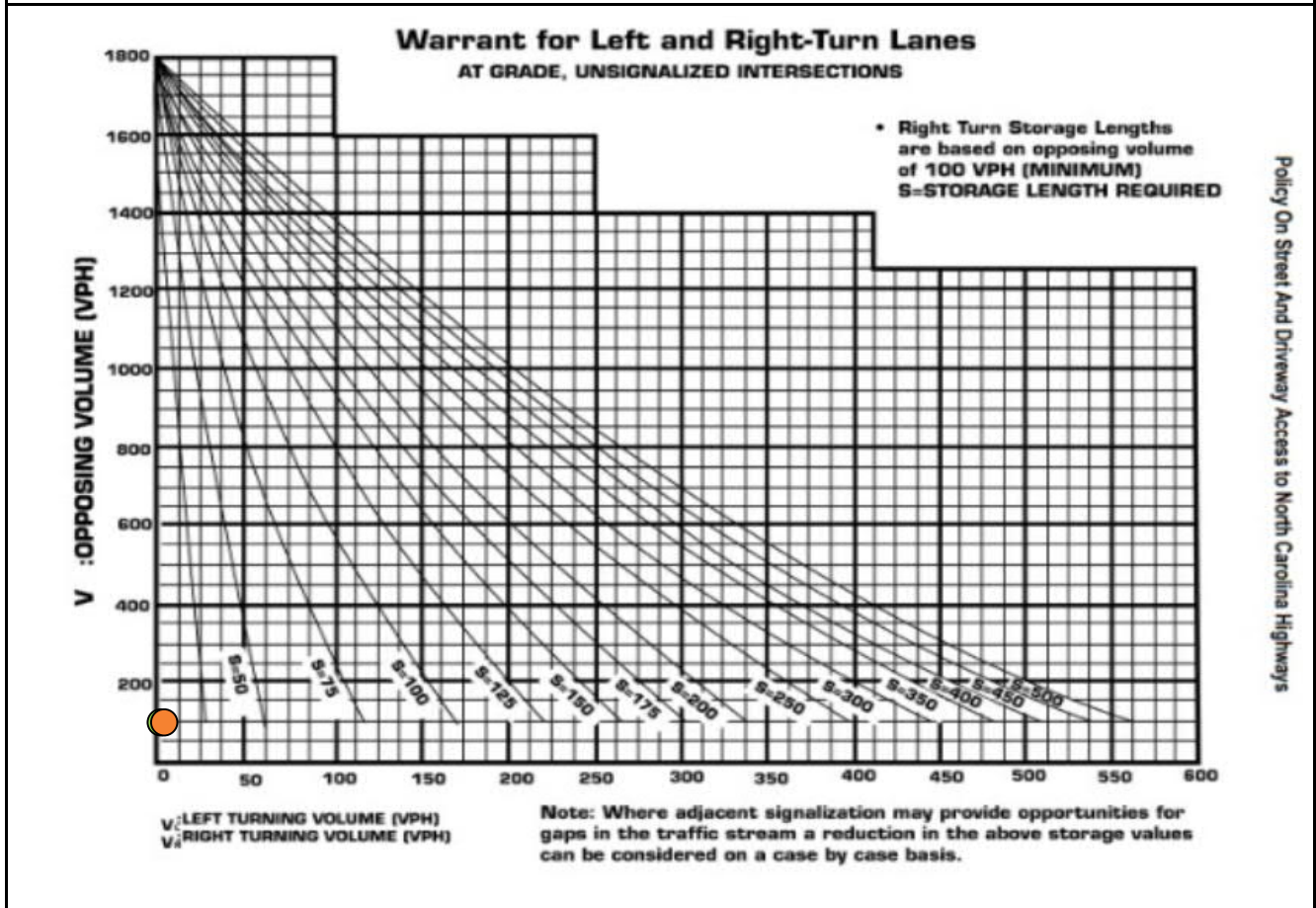
Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	38	28
Average Queue (ft)	5	4
95th Queue (ft)	22	18
Link Distance (ft)	864	1499
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 198

APPENDIX P: TURN LANE WARRANTS

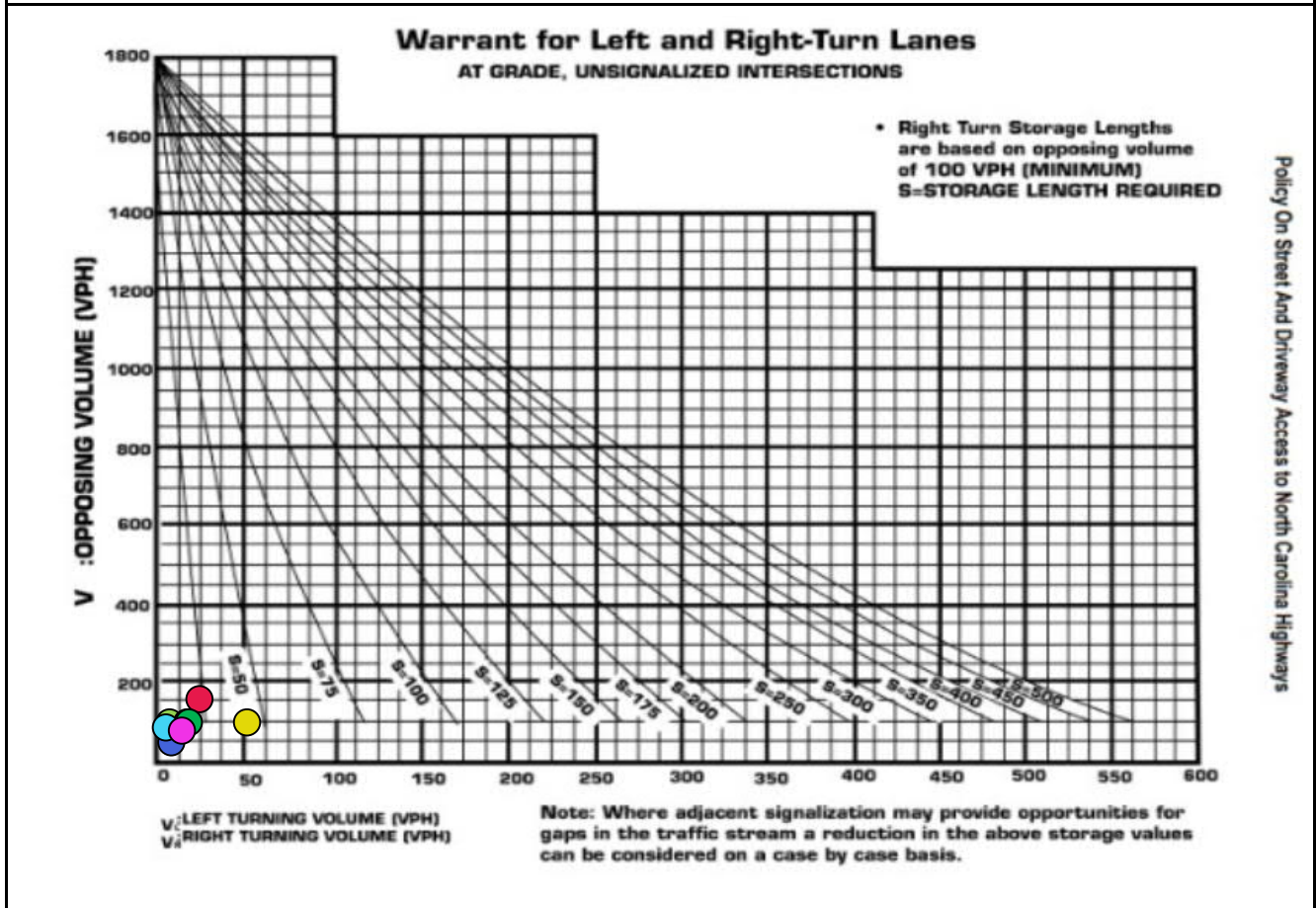
Chamblee Road + Site Drive 1



Peak Hour	Lane	Turn Lane	Turning Volume	Approach / Opposing Volume	Symbol	Length Warranted
Weekday AM	NBR	Right	1	100	●	N/A
Weekday PM	NBR	Right	3	100	●	N/A
					●	
					●	
					●	
					●	
					●	

Chamblee Property Zebulon, NC	MCADAMS
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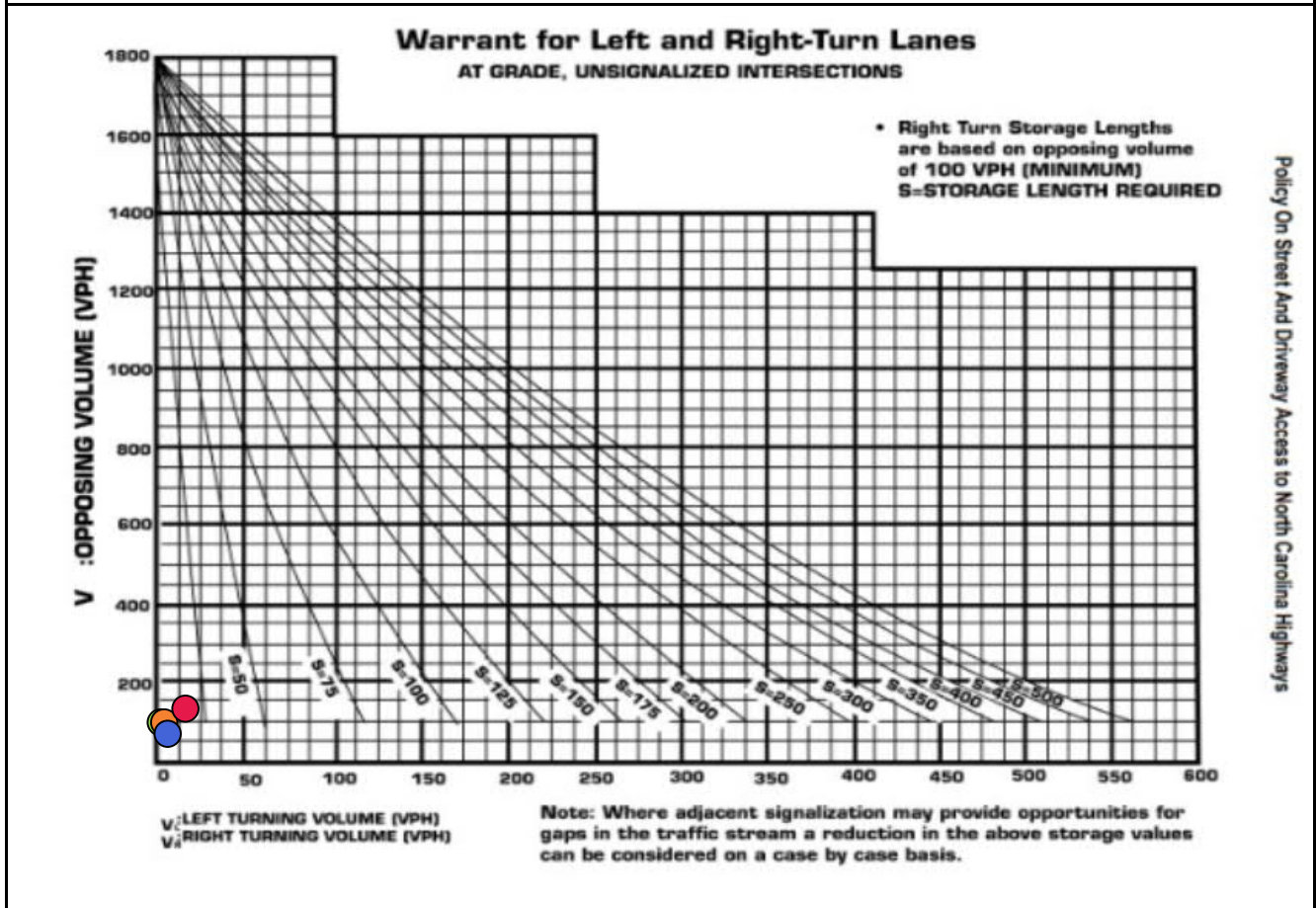
Chamblee Road + Site Drive 2



Peak Hour	Lane	Turn Lane	Turning Volume	Approach / Opposing Volume	Symbol	Length Warranted
Weekday AM	NBR	Right	6	100	Green Circle	N/A
Weekday PM	NBR	Right	16	100	Orange Circle	N/A
Weekday AM	NBL	Left	7	49	Blue Circle	N/A
Weekday PM	NBL	Left	23	159	Red Circle	N/A
Weekday AM	SBR	Right	17	100	Green Circle	N/A
Weekday PM	SBR	Right	50	100	Yellow Circle	N/A
Weekday AM	SBL	Left	4	87	Cyan Circle	N/A
Weekday PM	SBL	Left	13	79	Pink Circle	N/A

<p>Chamblee Property</p> <p>Zebulon, NC</p>	<p style="font-size: 24px; margin: 0;">MCADAMS</p>
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Chamblee Road + Site Drive 3



Peak Hour	Lane	Turn Lane	Turning Volume	Approach / Opposing Volume	Symbol	Length Warranted
Weekday AM	SBR	Right	1	100	●	N/A
Weekday PM	SBR	Right	3	100	●	N/A
Weekday AM	NBL	Left	5	71	●	N/A
Weekday PM	NBL	Left	15	135	●	N/A
					●	
					●	
					●	
					●	

<p>Chamblee Property</p> <p>Zebulon, NC</p>	<p style="font-size: 2em; font-weight: bold; margin-left: 10px;">MCADAMS</p>
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Dory Meadows Legal Description

Being all of the land described in deed book 1789, page 402 in the Durham County Register of Deeds. Being more particularly described as:

Beginning at a point on the northern right of way line of Chamblee Road (a 60 foot public right of way), being the southwest corner of Tract One as shown on book of maps 2020, page 866 in the Durham County Register of Deeds, the point of beginning; thence across the right of way of Chamblee Road and with the western line of Tract Three, as shown on book of maps 2020, page 866, South 00°19'14" East a distance of 541.01 feet to a point on the northern line of lands now or formally owned by Linda W. and Phillip Kilette, as described in deed book 8407, page 888; thence with the common line of Kilette and others, South 89°11'35" West a distance of 3101.18 feet to a point on the eastern line of lands now or formally owned by Rebecca H. Hinton, as described in deed book 2244, page 189; thence with the common line of Hinton and others, North 02°37'04" East a distance of 1937.74 feet to an axle, being the southwest corner of lands now or formally owned by Carolyn P. Chamblee, as described in estate file 2578, page 00-E; thence with the common line of Chamblee and others, North 88°59'09" East a distance of 3001.95 feet to an iron pipe on the western line of Tract One, as shown on book of maps 2020, page 866; thence with said common line, South 00°19'14" East a distance of 1404.20 feet to the point and place of beginning; containing an area of 5,918,772 square feet or 135.88 acres.



Town of Zebulon

Planning Department

1003 N. Arendell Avenue, Zebulon, NC 27597
Phone: (919) 823-1810 Fax: (919) 887-2824
www.townofzebulon.org

PLANNED DEVELOPMENT APPLICATION

GENERAL INFORMATION:

A Planned Development in accordance with Section 2.2.13 and 3.5.5 of the UDO is intended to provide flexibility by establishing site specific regulations including permitted uses, dimensional standards, phasing schedules and additional details to allow for a development that is better than what would otherwise be permitted under the strict interpretation of the UDO. All site-specific standards and conditions must be consistent with the objectives of these regulations, the adopted Comprehensive Land Use Plan, Transportation Plan, and Vision 2030 Strategic Plan. The review process established in this part provides for the accommodation of such uses by a reclassification of property into a Planned Development, subject to site-specific standards and conditions.

INSTRUCTIONS:

PRE-APPLICATION MEETING: A pre-application meeting with staff in accordance with Section 2.3.2 of the UDO to verify the application requirements, processes, and procedures regarding a proposed request. To schedule a meeting, applicants must e-mail a pdf map, drawing, model, site or sketch plan to Assistant Planning Director Meade Bradshaw (mbradshaw@TownofZebulon.org) no later than five (5) working days prior to the desired meeting day.

NEIGHBORHOOD MEETING: Neighborhood meetings are required in accordance with Section 2.3.4 of the UDO prior to application submission. The applicant is required to notify property owners and any neighborhood association that represents citizens within that area within 300 feet of the subject property via first class mail a minimum of 10 days in advance of the neighborhood meeting. The applicant shall use their own return address on the envelopes as the meeting is a private meeting between the developer and the neighbors. The applicant shall submit the "Certified List of Property Owners" and "Neighborhood Meeting Packet" forms included in this application packet with their initial submittal.

ANNEXATION REQUIREMENTS: If a property or portion thereof subject to this rezoning is outside the corporate limits and ETJ, an annexation petition is **required** to be submitted on the same day as this application in accordance with section 2.2.2 of the UDO.

APPLICATION PROCEDURE – The applicant requesting a Planned Development must submit a written application to the Zebulon Planning Department using the forms included in this packet.

- Completed Application Form
- 8 Full Size Plan Sets and 1 PDF set on USB drive. (see site plan checklist)
- Comprehensive Planned Development Document
- Petition Fee (Please See Fee Schedule)
- One (1) Legal Description (metes and bounds) of subject property
- Registered survey of subject property
- Certified List of Property Owners within 150 feet of subject property
- Owner's Consent Form
- Neighborhood Meeting Packet
- Stamped envelopes addressed to Certified List of Property Owners all the homeowners associations of those properties within 150 feet of the outer boundary subject property or properties affixed with the following return address:
 - Town of Zebulon
 - Planning Department
 - 1003 N. Arendell Ave
 - Zebulon, NC 27597



APPLICATION FOR PLANNED DEVELOPMENT

PUBLIC HEARING PROCEDURE – Upon submittal of a complete application, the Planning Department will schedule the application for a joint public hearing before the Planning Board and the Board of Commissioners. **APPLICANTS ARE STRONGLY ENCOURAGED TO CONTACT PLANNING STAFF AS SOON AS POSSIBLE TO ADDRESS ANY QUESTIONS ABOUT THE PUBLIC HEARING.** Notices of the public hearing will be mailed to all adjacent property owners of the property being considered for a Planned Development Amendment. At the public hearing, the applicant, proponents, and opponents will be given the opportunity to offer evidence in favor of or against the proposal. After completion of the public hearing, the Planning Board will deliberate and forward its recommendation to the Board of Commissioners for final consideration. Deadline dates and Joint Public Hearing dates can be found on the Town of Zebulon’s website.



APPLICATION FOR PLANNED DEVELOPMENT

PART 1. DESCRIPTION OF REQUEST/PROPERTY		
Street Address of the Property: 1509 Chamblee Rd, Zebulon NC	Acreage: ~136	
Parcel Identification Number (NC PIN): 2715101559	Deed Book: 001789	Deed Page(s): 00402
Existing Zoning of the Property: R-30 (Wake County)	Proposed Zoning of the Property: Planned Development (R4 base)	
Existing Use of the Property: N/A (Vacant)	Proposed Use of the Property: SFD and Townhome subdivision	
Reason for rezoning to a Planned Unit Development: In order to balance the significant amount of open space retained on site due to a multitude of environmental features, the applicant is seeking a Planned Unit Development to propose a mixed-use residential development with lot sizes and lot-orientations which require deviations from the development standards permitted within the Zebulon Unified Development Ordinance.		

PART 2. APPLICANT/AGENT INFORMATION		
Name of Applicant/Agent: David Bergmark		
Street Address of Applicant/Agent: 2905 Meridian Parkway		
City: Durham	State: NC	Zip Code: 27713
Email of Applicant/Agent: bergmark@mcadamsco.com	Telephone Number of Applicant/Agent: 919-449-4005	Fax Number of Applicant/Agent: N/A
Are you the owner of the property? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are you the owner's agent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Note: If you are not the owner of the property, you <u>must</u> obtain the Owner's consent and signature giving you permission to submit this application.

PART 3. PROPERTY OWNER INFORMATION		
Name of Property Owner: CHAMBLEE, R M HEIRS, C/O Jim Edwards (Jim P. Edwards, Jr.)		
Street Address of Property Owner: 2711 ROYSTER ST		
City: RALEIGH	State: NC	Zip Code: 27608
Email of Property Owner: Jim Edwards construction co. com	Telephone Number of Property Owner: 919-868-0570	Fax Number of Property Owner:

<i>I hereby state that the facts related in this application and any documents submitted herewith are complete, true, correct, and accurate to the best of my knowledge.</i>		
Signature of Applicant: 	Print Name: David Bergmark	Date: 9/19/22
Signature of Owner: 	Print Name: James P. Edwards, Jr.	Date:



APPLICATION FOR PLANNED DEVELOPMENT

LEGISLATIVE CONSIDERATIONS – PLANNED DEVELOPMENT

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed planned development is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest. Failure to adequately address the findings below may result in denial of the application. Please provide responses to the following standards as outlined in Section 2.2.13 of the Unified Development Ordinance.

1. Please provide details on how the proposed Planned Development advances the public health, safety, or welfare
See attached Exhibit A.
2. Please provide details on how the proposed Planned Development is appropriate for its proposed location, and is consistent with the purposes, goals, objectives, and policies of the Town's adopted policy guidance.
See attached Exhibit A.
3. Please provide details on how the proposed Planned Development is reasonable and in the public interest.
See attached Exhibit A.
4. Please provide details on how the proposed Planned Unit Development provides for innovative land planning and site design concepts that support a high quality of life and achieve a high quality of development, environmental sensitivity, energy efficiency, and other Town goals and objectives.
See attached Exhibit A.
5. Please provide details on how the proposed planned unit development provides improved means of access, open space, and design amenities;
See attached Exhibit A.



APPLICATION FOR PLANNED DEVELOPMENT

6. Please provide details on how the proposed Planned Unit Development provides a well-integrated mix of residential and nonresidential land uses in the same development, including a mix of housing types, lot sizes, and densities;

See attached Exhibit A.

7. Please provide details on how the proposed Planned Unit Development creates a system of incentives for redevelopment and infill in order to revitalize established areas;

See attached Exhibit A.

8. Please provide details on how the proposed Planned Unit Development promotes a vibrant public realm by placing increased emphasis on active ground floor uses, pedestrian-oriented building façade design, intensive use of sidewalks, and establishment of public gathering areas;

See attached Exhibit A.

9. Please provide details on how the proposed Planned Unit Development provides for efficient use of land resulting in smaller networks of utilities and streets and thereby lowering development and housing costs; and

See attached Exhibit A.

10. Please provide details on how the proposed Planned Unit Development provides quality design and environmentally sensitive development that respects surrounding established land use character and respects and takes advantage of a site's natural and man-made features, such as trees, estuaries, shorelines, special flood hazard area, and historic features.

See attached Exhibit A.

11. Other factors as the Board of Commissioners may determine to be relevant.

See attached Exhibit A.



APPLICATION FOR PLANNED DEVELOPMENT

OWNER'S CONSENT FORM

Name of Project: Dary Meadows Chamblee Rd Planned Development Submittal Date: 11-1-22

OWNER'S AUTHORIZATION

I hereby give CONSENT to D.R. Horton, McAdams (David Bergmark) and Longleaf Law Partners (type, stamp or print clearly full name of agent) to act on my behalf, to submit or have submitted this application and all required material and documents, and to attend and represent me at all meetings and public hearings pertaining to the application(s) indicated above. Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify I have full knowledge the property I have an ownership interest in is the subject of this application. I acknowledge and agree that, pursuant to Section 2.2.13. of the Town of Zebulon Unified Development Ordinance, that lands subject to a Planned Development shall be subject to all the standards, conditions, and plans approved as part of that application. These standards, plans, and approved conditions are perpetually binding on the land as an amendment to this Ordinance and the Official Zoning Map, and may only be changed in accordance with the procedures established in this Ordinance. Development located outside the Town of Zebulon's corporate limits shall comply with all Town policies related to annexation and the extension of utilities. I understand that all other applicable standards and regulations of the UDO will remain applicable to the subject lands unless specifically listed as conditions or deviations as part of this request. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I acknowledge that additional information may be required to process this application. I further consent to the Town of Zebulon to publish, copy or reproduce any copyrighted document submitted as a part of this application for any third party. I further agree to all terms and conditions, which may be imposed as part of the approval of this application.

James P. Edwards, Jr.
Signature of Owner

Chamblee, R M Heirs
Print Name James P. Edwards, Jr. Date 9/19/22

CERTIFICATION OF PROPERTY OWNER

I hereby certify the statements or information made in any paper or plans submitted herewith are true and correct to the best of my knowledge. I understand this application, related material and all attachments become official records of the Planning Department of the Town of Zebulon, North Carolina, and will not be returned.

JAMES P. EDWARDS, JR.
Signature of Owner

Chamblee, R M Heirs
Print Name James P. Edwards, Jr. Date 9/19/22

*Owner of record as shown by the Wake County Revenue Department (www.wakegov.com). An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this form.



APPLICATION FOR PLANNED DEVELOPMENT

CONCEPT PLAN REQUIREMENTS

Every applicant requesting Planned Development approval shall submit **8 copies** and **1 pdf (e-mail or USB Drive)** of a concept plan drawing with the application for a Planned Development. The concept plan shall contain sufficient information to adequately determine the type of development being proposed. The concept plan drawing shall include, at a minimum, the following features unless otherwise specified by the Planning Department:

**CHECK IF
SUBMITTED**

ITEM

- | | | |
|-----|--|----------|
| 1. | Plot plan showing all existing and planned structures, building setback lines, perimeter boundaries, and easements. | <u>✓</u> |
| 2. | Elevation drawings of all buildings indicating the proposed exterior finish materials. | <u>✓</u> |
| 3. | Landscaping plan, lighting, fencing, screening, and walls, indicating all heights and locations. | <u>✓</u> |
| 4. | Location of all ingress and egress. | <u>✓</u> |
| 5. | Off-street parking and loading facilities, with calculations showing how the quantities were obtained. | <u>✓</u> |
| 6. | All pedestrian walks and open areas for use by residents, tenants, or the public. | <u>✓</u> |
| 7. | Proposed land uses indicating areas in square feet. | <u>✓</u> |
| 8. | The location and types of all signs, including lighting and heights, with elevation drawings. | <u>✓</u> |
| 9. | Existing and/or proposed street names. | <u>✓</u> |
| 10. | Proposed potable or reuse water, wastewater connections, and storm sewer line; proposed grading and drainage patterns; proposed water and sewer allocations. | <u>✓</u> |
| 11. | Such additional items and conditions, including design standards as the Planning Board and Board of Commissioners deems necessary. | <u>✓</u> |
| 12. | Trip generation data and TIA | <u>✓</u> |



APPLICATION FOR PLANNED DEVELOPMENT

PROPOSED USES

An application has been duly filed requesting that the property described in this application be rezoned from R-30 (Wake County) to Planned Development (PD). It is understood and acknowledged that if the property is rezoned as requested, the property described in this request will be perpetually bound to the use(s) authorized and subject to such conditions as imposed, unless subsequently changed or amended as provided for in the Unified Development Ordinance. It is further understood and acknowledged that final plans for any specific development to be made pursuant to any such Planned Development shall be submitted for site or subdivision plan approval. Use additional pages as needed.

The Rezoned Lands may be used for, and only for, the uses listed immediately below. The permitted uses are subject to the limitations and regulations stated in the Use Table and any additional limitations or regulations stated below. For convenience, some relevant sections of the Unified Development Ordinance may be referenced; such references do not imply that other sections of the Unified Development Ordinance do not apply.

1.	Single Family Detached Dwelling	25.	
2.	Single Family Attached Dwelling	26.	
3.	Accessory Dwelling Unit	27.	
4.	Cluster Box Unit	28.	
5.	Detached Accessory Structure	29.	
6.	Guard House, Shelter, or Gatehouse	30.	
7.	Home Occupation	31.	
8.	Play Equipment	32.	
9.	Swimming Pool/Hot Tub	33.	
10.	Tool/Storage Shed	34.	
11.		35.	
12.		36.	
13.		37.	
14.		38.	
15.		39.	
16.		40.	
17.		41.	
18.		42.	
19.		43.	
20.		44.	
21.		45.	
22.		46.	
23.		47.	
24.		48.	

**Certified List of Property Owners (Wake Co. Real Estate Records) - 200 ft buffer applied (instead of 150) to be conservative.
 (NOTE: stamped envelopes provided for this full list)**

PIN_NUM	OWNER	ADDR1	ADDR2	SITE_ADDRESS
2714081891	STRICKLAND, FRANCES MARIE STRICKLAND, ROGER L	1101 FIELD MEADOWS DR	ZEBULON NC 27597-6852	1101 FIELD MEADOWS DR
2715115366	LIVERMAN, LORAIN E	1404 CHAMBLEE RD	ZEBULON NC 27597-9668	1404 CHAMBLEE RD
2714193007	FOUNTAIN, JAMES I III FOUNTAIN, LAURA E	10405 PERRY RIDGE CT	ZEBULON NC 27597-6844	10405 PERRY RIDGE CT
2715215283	POOLE, JOSHUA	1516 CARROLL HEIGHTS RD	ZEBULON NC 27597-9640	1516 CARROLL HEIGHTS RD
2704984963	MITCHELL, F WADDELL MITCHELL, JANE H	504 PERRY CURTIS RD	ZEBULON NC 27597-8877	504 PERRY CURTIS RD
2714299043	KILLETTE, PHILLIP KILLETTE, LINDA W	929 PERRY CURTIS RD	ZEBULON NC 27597-8886	929 PERRY CURTIS RD
2714282739	CRENSHAW, BARRY A	833 PERRY CURTIS RD	ZEBULON NC 27597-8884	833 PERRY CURTIS RD
2714286726	KILLETTE, PHILLIP KILLETTE, LINDA W	929 PERRY CURTIS RD	ZEBULON NC 27597-8886	905 PERRY CURTIS RD
2715116128	DOZIER, CLARA RHODES	255 DAVIS RD	ZEBULON NC 27597-7046	1412 CHAMBLEE RD
2714080800	MITCHELL, FRANK W MITCHELL, JANE H	504 PERRY CURTIS RD	ZEBULON NC 27597-8877	1108 FIELD MEADOWS DR
2715214284	ROBERTSON, ROBERT J	1512 CARROLL HEIGHTS RD	ZEBULON NC 27597-9640	1512 CARROLL HEIGHTS RD
2705912377	PATE FAMILY I LTD PTNRP	2333 ZEBULON RD	ZEBULON NC 27597-8155	0 PERRY CURTIS RD
2715217214	KHALIOUI, YOUNES	1520 CARROLL HEIGHTS RD	ZEBULON NC 27597-9640	1520 CARROLL HEIGHTS RD
2714191047	KIRIAZES, KENNETH E KIRIAZES, MARIE A	10401 PERRY RIDGE CT	ZEBULON NC 27597-6844	10401 PERRY RIDGE CT
2714195099	BRODEUR, MADELINE	10413 PERRY RIDGE CT	ZEBULON NC 27597-6844	10413 PERRY RIDGE CT
2714194057	HINNANT, HULEY JR HINNANT, GERALDINE	10409 PERRY RIDGE CT	ZEBULON NC 27597-6844	10409 PERRY RIDGE CT
2714197170	SMITH, KENNETH R SMITH, TONYA K	10417 PERRY RIDGE CT	ZEBULON NC 27597-6844	10417 PERRY RIDGE CT
2704995359	HINTON, REBECCA H	409 S ARENDELL AVE	ZEBULON NC 27597-2807	612 PERRY CURTIS RD
2715101559	CHAMBLEE, R M HEIRS; C/O JIM EDWARDS	2711 ROYSTER ST	RALEIGH NC 27608-1529	1509 CHAMBLEE RD
2715211421	HARBAR, LINDA WATKINS, ANGELA	1501 CARROLL HEIGHTS RD	ZEBULON NC 27597-9641	1501 CARROLL HEIGHTS RD
2715219341	HAUGH, PAUL G HAUGH, HEATHER W	1532 CARROLL HEIGHTS RD	ZEBULON NC 27597-9640	1532 CARROLL HEIGHTS RD
2714083747	MOZINGO, JUDY B	708 PERRY CURTIS RD	ZEBULON NC 27597-8881	708 PERRY CURTIS RD
2715116216	JUAREZ, PEDRO CARREON JUAREZ, MARIA DEL	1408 CHAMBLEE RD	ZEBULON NC 27597-9668	1408 CHAMBLEE RD
2715019636	CHAMBLEE, CAROLYN P	1922 TRAWICK RD	RALEIGH NC 27604-3839	0 CHAMBLEE RD
2714098086	SARNA, KERRY RICHARD	1001 RIDGE VALLEY WAY	ZEBULON NC 27597-6845	1001 RIDGE VALLEY WAY
2714097005	GONZALEZ, ALFONSO GONZALEZ	10303 PERRY RIDGE CT	ZEBULON NC 27597-6842	10303 PERRY RIDGE CT
2715212207	WILLIAMS, GEORGETTE	1413 CHAMBLEE RD	ZEBULON NC 27597-9669	1413 CHAMBLEE RD
2714080938	ALVAREZ-CORNEJO, AZUCENA	1104 FIELD MEADOWS DR	ZEBULON NC 27597-6852	1104 FIELD MEADOWS DR
2715410167	DAN RYAN BUILDERS - NORTH CAROLINA LLC	2099 GAITHER RD STE 600	ROCKVILLE MD 20850-4018	0 CHAMBLEE RD
2714383837	MCNABB, WILLIAM R	204 W GANNON AVE	ZEBULON NC 27597-2626	0 CHAMBLEE RD
2714093190	FOCA, KIMBERLY	706 PERRY CURTIS RD	ZEBULON NC 27597-8881	706 PERRY CURTIS RD

2715213285	TELLEZ MAGANA, MARIA TERESA	1508 CARROLL HEIGHTS RD	ZEBULON NC 27597-9640	1508 CARROLL HEIGHTS RD
2715212128	WALL, JODY C	133 W 1ST ST	WENDELL NC 27591-7600	1417 CHAMBLEE RD
2714189947	HOAD, RYAN PATRICK HOAD, JAMIE LEIGH	10421 PERRY RIDGE CT	ZEBULON NC 27597-6844	10421 PERRY RIDGE CT
2714085959	NUNEZ, RICARDO RODRIGUEZ, ANGELICA MARIA	10301 PERRY RIDGE CT	ZEBULON NC 27597-6842	10301 PERRY RIDGE CT
2714091017	OLVERA, RAMON HERNANDEZ	1100 FIELD MEADOWS DR	ZEBULON NC 27597-6852	1100 FIELD MEADOWS DR
2714495712	DRSFA LLC	2099 GAITHER RD STE 600	ROCKVILLE MD 20850-4018	1701 CHAMBLEE RD

Dory Meadows Legal Description

Being all of the land described in deed book 1789, page 402 in the Durham County Register of Deeds.
Being more particularly described as:

Beginning at a point on the northern right of way line of Chamblee Road (a 60 foot public right of way), being the southwest corner of Tract One as shown on book of maps 2020, page 866 in the Durham County Register of Deeds, the point of beginning; thence across the right of way of Chamblee Road and with the western line of Tract Three, as shown on book of maps 2020, page 866, South 00°19'14" East a distance of 541.01 feet to a point on the northern line of lands now or formally owned by Linda W. and Phillip Killelte, as described in deed book 8407, page 888; thence with the common line of Killelte and others, South 89°11'35" West a distance of 3101.18 feet to a point on the eastern line of lands now or formally owned by Rebecca H. Hinton, as described in deed book 2244, page 189; thence with the common line of Hinton and others, North 02°37'04" East a distance of 1937.74 feet to an axle, being the southwest corner of lands now or formally owned by Carolyn P. Chamblee, as described in estate file 2578, page 00-E; thence with the common line of Chamblee and others, North 88°59'09" East a distance of 3001.95 feet to an iron pipe on the western line of Tract One, as shown on book of maps 2020, page 866; thence with said common line, South 00°19'14" East a distance of 1404.20 feet to the point and place of beginning; containing an area of 5,918,772 square feet or 135.88 acres.

Exhibit A: Dory Meadows Planned Development Application Responses

- 1. Please provide details on how the proposed Planned Development advances the public health, safety, or welfare.**

Response: The proposed Planned Development will provide a much-needed supply of housing in a regional market that is chronically undersupplied – resulting in significant housing affordability issues due to skyrocketing home prices. Furthermore, the proposed location of this development will result in a safe and convenient neighborhood within a 5-minute drive to the Zebulon Community Park, shopping in downtown Zebulon, and a local fire station and EMS station. The development will be within a 10-minute drive of the local police station and all levels of grade schools. Finally, with over 1/3rd of the gross acreage retained as open space, the proposed Planned Development will help protect environmental health and promote a more active lifestyle.

- 2. Please provide details on how the proposed Planned Development is appropriate for its proposed location, and is consistent with the purposes, goals, objectives, and policies of the Town’s adopted policy guidance.**

Response: Though this development would constitute a satellite annexation, it abuts a previously approved satellite annexation known as Sidney Creek. Thus, municipal services are already being extended to this area. Furthermore, as indicated in Response #1, this site is less than a 10 minute drive to the areas schools, downtown shopping, and public safety facilities.

The adopted Future Land Use Map designates this area as Suburban Residential (SR) and identifies one of the Primary Land Use Types for Suburban Residential as, “Planned developments that integrate other housing types (e.g., attached residential such as patio homes or townhomes) [in addition to Detached residential dwellings], with increased open space to preserve an overall suburban character.” Thus, the proposed Planned Development with a mix of SFD detached dwellings, attached dwellings, and over 1/3rd of gross acreage as open space precisely fits the intended use and place type within the SR FLU designation.

Furthermore, this Planned Development advances the following goals and policies of the Town’s adopted Comprehensive Plan:

- a. [Land Use and Development – Goal 1] – “A land use allocation and pattern that advances Zebulon’s objectives of achieving greater housing variety.....with convenient resident access to schools, recreation, shopping and Services.”**

i. **Supporting Statement(s):**

1. The site is located within a 5-minute drive to Zebulon Community Park, Downtown Zebulon Shopping, Fire Station, and EMS station and less than 10 minutes from Zebulon elementary, middle, and high school.
2. The proposed development includes a mix of rear-loaded homes SFD homes, front-loaded SFD homes, and Townhomes, providing a variety of housing options to suit different needs.

- b. **[Land Use and Development – Goal 3]** – “Ongoing and effective collaboration between land use and transportation planning to ensure a well-connected community with adequate means and capacity to accommodate multiple forms of circulation between local destinations.”

i. **Supporting Statement(s):**

1. The proposed Planned Development incorporates a new E-W collector road free of driveways, which will ultimately form a new connection between Chamblee Road and Perry Curtis road to the west. This new route will form a travel alternative to the current Perry Curtis Road connection to Chamblee road – one with significantly improved access management and which aligns through the Planned Development directly to the Sidney Creek subdivision to the east. This new collector road, through its future westward extension, could be designed as the main E-W throughway to Chamblee road in lieu of the current Perry Curtis Road connection, or it could “T” into Perry Curtis Road. This decision could be made in the future based upon traffic needs at that time and with coordination with NCDOT.

- c. **[Land Use and Development – Policy C]** – “Emphasize compatible intensities and character when evaluating applications involving more intensive and/or non-residential development near existing homes and neighborhoods.

i. **Supporting Statement(s):**

1. The proposed Planned Development locates its denser Townhome units closer to Chamblee Road, where existing infrastructure is most capable of serving it. Furthermore, the location of townhomes on the east side of Chamblee Road connects to proposed Townhomes to be established as a future phase of the Sidney Creek development. Detached single family home lots are proposed along most of the project perimeter, where the proposed PD abuts existing subdivisions such as the Perry Creek and Fieldcrest Meadow subdivisions to the south. A riparian buffer and additional undisturbed open

space is left along the site's northern boundary where it abuts the Carroll Heights subdivision.

- d. **[Land Use and Development – Policy D]** – “Promote land use outcomes that further community objectives for preventing traffic congestion, ensuring more pedestrian- and cyclist-friendly design, and support expanded and viable public transit options.”
 - i. **Supporting Statement(s):**
 - 1. As explained under the response for Goal 3 for Land Use and Development, the proposed E-W collector road will be unloaded with driveways and will enhance both vehicular, bicycle, and pedestrian connectivity. Additional trail networks within the site's open space will further support recreational bicycle and pedestrian use.
- e. **[Land Use and Development – Policy E]** – “Ensure development design respects the area's environmental assets and resource base, including waterways and their riparian buffers, unique landscapes, and mature tree stands, especially where there is potential for greenway and/or blueway acquisition.”
 - i. **Supporting Statement(s):**
 - 1. As proposed the Planned Development retains approximately 1/3rd of the site as open space (both passive and active). The site design integrates and provides convenient access to several environmental features, including riparian buffers, over 10 acres of wooded wetlands, and a 5+ acre lake. The main amenity for the development is located along this existing lake, letting the natural environment serve as an extension of and backdrop to this active open space. The site's larger residential lots back up to this lake, with a pedestrian trail network providing access along its perimeter.
- f. **[Land Use and Development – Policy G]** – “Ensure that all residential developments have multiple access points for public safety reasons and circulation options.”
 - i. **Supporting Statement(s):**
 - 1. The proposed Planned Development has multiple access points along Chamblee Road, connects to a future phase of the Sidney Creek approved development to the east, and connects to Perry Curtis Road via an the existing stub of Ridge Valley Way to the south. Roadway stubs will also be provided in 2 locations along the northern property boundary – to be extended at the time of future development.
- g. **[General Policy – G1]** – “Land uses should not detract from the enjoyment or value of neighboring properties.”
 - i. **Supporting Statement(s):**

1. All proposed uses are residential in nature, abutting existing residential uses or vacant land. A Type B buffer (20' width) is provided along the project perimeter (either as preserved vegetation or new plantings).
- h. **[General Policy – G3]** – “Adequate transportation access and circulation should be provided for uses that generate large numbers of trips. Pedestrian and bicycle access should be addressed where appropriate.”
- i. **Supporting Material:**
 1. The proposed Planned Development incorporates a new E-W collector road free of driveways, which will ultimately form a new connection between Chamblee Road and Perry Curtis road to the west. This new route will form a travel alternative to the current Perry Curtis Road connection to Chamblee road – one with significantly improved access management and which aligns through the Planned Development directly to the Sidney Creek subdivision to the east.
 2. Sidewalks shall be provided along all proposed streets and off-street pedestrian trails shall be provided to improve access to the site’s natural features and active open spaces.
- i. **[General Policy – G6]** – “Environmentally sensitive areas should be protected, including wildlife habitat areas.”
- i. **Supporting Statement(s):**
 1. The proposed site design avoids any new vehicular crossings of riparian buffers, as well as works around a significant (>10 acre) wetland area in the southeastern portion of the site. Pedestrian access is provided to these areas to allow for community enjoyment and exposure to nature, but otherwise they are left undisturbed.
- j. **[Residential Policy – R1]** – “Residential areas should not be located next to heavy industrial areas.”
- i. **Supporting Statement(s):**
 1. All adjacent zoning and existing uses are residential or agricultural in nature. No industrial areas are located adjacent to the proposed planned development.
- k. **[Residential Policy – R3]** – “Schools, parks and community facilities should be located close to or within residential neighborhoods.”
- i. **Supporting Statement(s):**
 1. The site has over 4 acres of private/active open space proposed within the residential neighborhood.

2. The site is within a 5-minute drive to Zebulon Community Park, Downtown Zebulon Shopping, a Fire Station, and an EMS station.
 3. The site is less than a 10-minute drive to elementary, middle, and high schools.
- l. **[Residential Policy – R4]** – “Houses should have direct access to local residential streets but not to collector streets or thoroughfares.
- i. **Supporting Statement(s):**
 1. No driveways are located along the site’s proposed E-W collector road. All dwelling units have direct access to a local residential street or an alley.
- m. **[Residential Policy – R7]** – “New residential developments should include adequate area for parks and recreation facilities, schools and places of worship.
- i. **Supporting Statement(s):**
 1. The site has over 40 acres open spaces, including over 4 acres of private, active open space.
- n. **[Parks and Open space Policy – P5]** – “Natural features should be used as buffers or preserved open space between or around developed areas.”
- i. **Supporting Statement(s):**
 1. The proposed Planned Development utilizes both riparian buffers and wooded woodlands to provide natural buffers between developed areas.

3. Please provide details on how the proposed Planned Development is reasonable and in the public interest.

Response: As indicated in the responses above, the proposed uses and density is aligned with the adopted Future Land Use Map and place types intended for the suburban residential designation. The site is adjacent to an large existing satellite annexation, meaning urban services have already been extended to this area and the extension of those services to this development will not incur any disproportionate ongoing costs to service agencies (police, fire, public works, etc.). Finally, the site protects a significant amount of natural areas, while providing an east-west collector road free of driveways to facilitate connectivity and ease the amount of traffic utilizing a portion of Perry Curtis road which does not have nearly as good access management as the proposed development.

4. Please provide details on how the proposed Planned Unit Development provides for innovative land planning and site design concepts that support a high quality of life

and achieve a high quality of development, environmental sensitivity, energy efficiency, and other Town goals and objectives.

Response: The proposed Planned Development utilizes the natural features of the site as an asset to be built around, rather than as an obstacle to overcome. The site design integrates and provides convenient access to several environmental features, including riparian buffers, over 10 acres of wooded wetlands, and a 5+ acre lake. The main amenity for the development is located along this existing lake, letting the natural environment serve as an extension of and backdrop to this active open space. The site's larger residential lots back up to this lake, with a pedestrian trail network providing access along its perimeter. Existing wetlands and riparian buffers are preserved and used along the northern and southern property boundaries as natural perimeter buffers.

The proposed E-W collector street provides improved access and connectivity at a scale that does not split the community in terms of pedestrian cross-access. Furthermore, the absence of driveways along this collector street allows for a much more aesthetically pleasing and pedestrian friendly streetscape for the development's primary connecting street.

5. Please provide details on how the proposed planned unit development provides improved means of access, open space, and design amenities.

Response: The proposed layout provides 3 points of access along Chamblee Road, 3 local street stubs to be extended when future development is proposed, a connection which aligns with the proposed Sidney Creek street layout to the east and will provide direct access to Chamblee Road for this adjacent development, and a new collector street that when extended through 1 additional property to the west will provide an improved alternative to a portion of Perry Curtis Road for east-west movement.

Active open spaces are distributed throughout the development for convenient access and are located along the site's major internal roadway. The main amenity utilizes the large existing lake as a significant site feature. Architectural design standards are proffered for the development, as outlined in the Planned Development document.

6. Please provide details on how the proposed Planned Unit Development provides a well-integrated mix of residential and nonresidential land uses in the same development, including a mix of housing types, lot sizes, and densities.

Response: Due to the future land use plan's 'Suburban Residential' designation for this area, non-residential land uses are not included in the overall layout. However, the site does include a mix of housing types, lot sizes, lot orientations, and densities in the form of single family detached dwellings and townhomes. Details on dimensional standards for the sites different residential products are contained in the associated Planned Development document.

7. Please provide details on how the proposed Planned Unit Development creates a system of incentives for redevelopment and infill in order to revitalize established areas.

Response: The proposed development is primarily surrounded by vacant land, creating an incentive for 'development' rather than 'redevelopment', as roadway and utility extensions included as part of this project make adjacent development more viable. Redevelopment opportunities in this area would likely be more limited to potential future pedestrian improvements in an existing adjacent neighborhood.

8. Please provide details on how the proposed Planned Unit Development promotes a vibrant public realm by placing increased emphasis on active ground floor uses, pedestrian-oriented building façade design, intensive use of sidewalks, and establishment of public gathering areas.

Response: The layout for the proposed development is intentional in terms of its creation of public gathering areas in the form of active and passive open spaces. The primary amenity is centrally located within the development along the site's primary internal road and backing up to a large lake. This amenity will serve as the heart of this neighborhood, where both formal and informal events are held.

In addition to the site's active open spaces, the proposed Planned Development will have an extensive pedestrian trail system that facilitates the use of its public gathering areas. All local new roads shall have sidewalks on both sides.

9. Please provide details on how the proposed Planned Unit Development provides for efficient use of land resulting in smaller networks of utilities and streets and thereby lowering development and housing costs.

Response: The proposed layout preserves approximately 1/3rd of its acreage as passive or active open space. The result of this type of layout is a more condensed

development pattern with smaller lots served by less linear feet of infrastructure, surrounded by a significant amount of common open space in lieu of larger individual yards. The interconnected road network is only limited by the numerous environmental features which this site must accommodate.

10. Please provide details on how the proposed Planned Unit Development provides quality design and environmentally sensitive development that respects surrounding established land use character and respects and takes advantage of a site's natural and man-made features, such as trees, estuaries, shorelines, special flood hazard area, and historic features.

Response: As mentioned in previous responses, the site design preserves and provides convenient access to several environmental features, including riparian buffers, over 10 acres of wooded wetlands, and a 5+ acre lake. The main amenity for the development is located along this existing lake, letting the natural environment serve as an extension of and backdrop to this active open space. The site's larger residential lots back up to this lake, with a pedestrian trail network providing access along its perimeter.

Existing wetlands and riparian buffers are preserved and used along the northern and southern property boundaries in locations as natural perimeter buffers. Where these existing features are not present along the project perimeter, a minimum Type B Buffer is proposed.

To better align with nearby development, the site's Townhomes are clustered on the eastern side of the development, adjacent to approved Townhomes to be built as part of the Sidney Creek development.

11. Other factors as the Board of Commissioners may determine to be relevant.

Response: The inclusion of some front-loaded townhomes within the development helps create a more diverse and economically resilient residential offering and supports housing affordability by avoiding rear-loaded alleys within this segment.

Please refer to the associated Planned Development document for more information on proposed architectural conditions.



APPLICATION FOR PLANNED DEVELOPMENT

OWNER'S CONSENT FORM

Name of Project: Dary Meadows Chamblee Rd Planned Development Submittal Date: 11-1-22

OWNER'S AUTHORIZATION

I hereby give CONSENT to D.R. Horton, McAdams (David Bergmark) and Longleaf Law Partners (type, stamp or print clearly full name of agent) to act on my behalf, to submit or have submitted this application and all required material and documents, and to attend and represent me at all meetings and public hearings pertaining to the application(s) indicated above. Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify I have full knowledge the property I have an ownership interest in is the subject of this application. I acknowledge and agree that, pursuant to Section 2.2.13. of the Town of Zebulon Unified Development Ordinance, that lands subject to a Planned Development shall be subject to all the standards, conditions, and plans approved as part of that application. These standards, plans, and approved conditions are perpetually binding on the land as an amendment to this Ordinance and the Official Zoning Map, and may only be changed in accordance with the procedures established in this Ordinance. Development located outside the Town of Zebulon's corporate limits shall comply with all Town policies related to annexation and the extension of utilities. I understand that all other applicable standards and regulations of the UDO will remain applicable to the subject lands unless specifically listed as conditions or deviations as part of this request. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I acknowledge that additional information may be required to process this application. I further consent to the Town of Zebulon to publish, copy or reproduce any copyrighted document submitted as a part of this application for any third party. I further agree to all terms and conditions, which may be imposed as part of the approval of this application.

James P. Edwards, Jr.
Signature of Owner

Chamblee, R M Heirs
Print Name James P. Edwards, Jr. Date 9/19/22

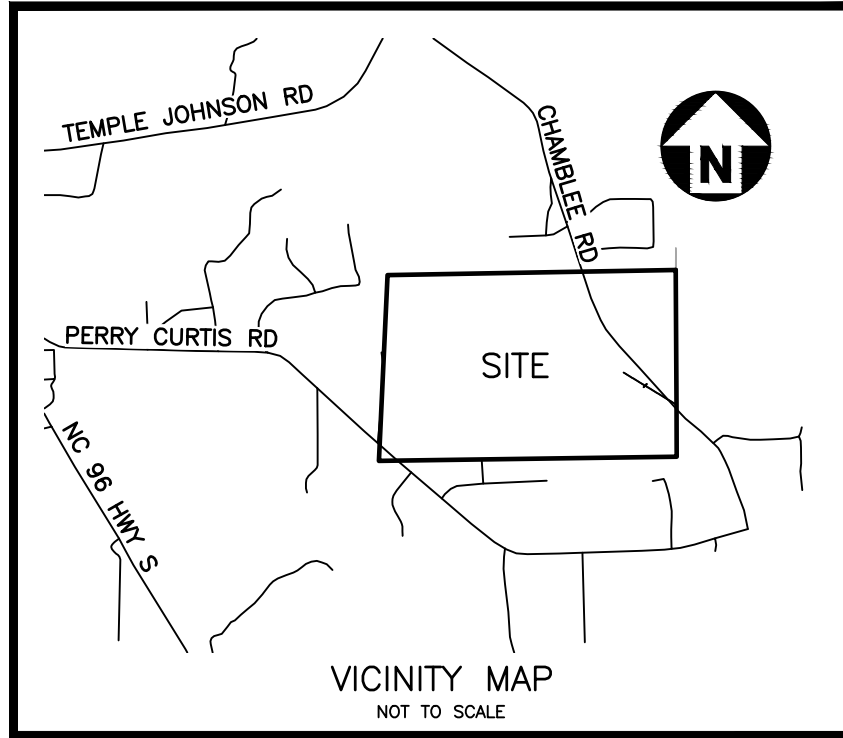
CERTIFICATION OF PROPERTY OWNER

I hereby certify the statements or information made in any paper or plans submitted herewith are true and correct to the best of my knowledge. I understand this application, related material and all attachments become official records of the Planning Department of the Town of Zebulon, North Carolina, and will not be returned.

JAMES P. EDWARDS, JR.
Signature of Owner

Chamblee, R M Heirs
Print Name James P. Edwards, Jr. Date 9/19/22

*Owner of record as shown by the Wake County Revenue Department (www.wakegov.com). An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this form.



I, GREGORY C. BEWLEY, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION FROM DEED DESCRIPTION RECORDED IN BOOK AND PAGE (AS SHOWN); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AND DRAWN FROM INFORMATION FOUND IN BOOK AND PAGE (AS SHOWN); THAT THE RATIO OF PRECISION AS CALCULATED IS 1:470.30; AND THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

I HEREBY CERTIFY THAT THIS PLAT IS OF THE FOLLOWING TYPE: G.S. 47-30 (D)(1)(c)(1). THIS SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET.

WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER, AND SEAL THIS

_____ DAY OF _____ A.D. 2022.

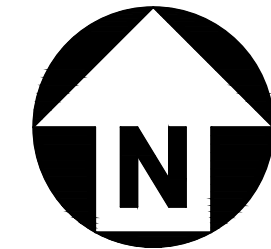
GREGORY C. BEWLEY PLS L-4805



GENERAL NOTES

1. THIS IS A SURVEY OF AN EXISTING PARCEL(S) OF LAND. THIS IS AN ANNEXATION PLAT.
2. BEARINGS FOR THIS SURVEY ARE BASED ON NC GRID NAD 83(2011).
3. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
4. ZONING: R-30 PER WAKE COUNTY GIS
5. AREA BY COORDINATE GEOMETRY.
6. FLOOD NOTE: THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE "X" AS DEFINED BY F.E.M.A. F.I.R.M. COMMUNITY PANEL #3720271500M AND 3720271400K DATED JULY 19, 2022 AND MAY 6, 2006.

LABEL NUMBER	ADJOINER INFORMATION
1	N/F CLARA RHODES DOZIER PIN: 2715116128 DB. -, PG. -
2	N/F JODY C. WALL PIN: 2715212128 DB. 18383, PG. 905
3	N/F MARIA TERESA, MAGANA TELLEZ PIN: 2715213285 DB. 18921, PG. 2130
4	N/F ROBERT J. ROBERTSON PIN: 2715214284 DB. 12371, PG. 190
5	N/F JOSHUA POOLE PIN: 2715215283 DB. 17214, PG. 2421
6	N/F YOUNES KHALIOUI PIN: 2715217214 DB. 14292, PG. 2155 BM. 1971, PG. 228
7	N/F HEATHER W. AND PAUL G. HAUGH PIN: 2715219341 DB. 6823, PG. 860 BM. 2013, PG. 02
8	N/F RAMON HERNANDEZ OLVERA PIN: 2714091017 DB. 9063, PG. 640 BM. 2001, PG. 749
9	N/F KIMBERLY FOCA PIN: 2714093190 DB. 17931, PG. 15 BM. 2000, PG. 2135
10	N/F ALFONSO GONZALEZ PIN: 2714097005 DB. 17117, PG. 139 BM. 2000, PG. 2209
11	N/F KERRY RICHARD SARNA PIN: 2714098086 DB. 12679, PG. 1130 BM. 2000, PG. 2209
12	N/F MARIE A. AND KENNETH E. KIRIAZES PIN: 2714191047 DB. 9404, PG. 2496 BM. 2000, PG. 2209
13	N/F LAURA E. AND JAMES I. FOUNTAIN PIN: 2714193007 DB. 15885, PG. 1274 BM. 2000, PG. 2209
14	N/F GERALDINE AND HULEY JR. HINNANT PIN: 2714194057 DB. 9115, PG. 106 BM. 2000, PG. 2209
15	N/F MADELINE BRODEUR PIN: 2714195099 DB. 11351, PG. 463 BM. 2000, PG. 2209
16	N/F TONYA K. AND KENNETH R. SMITH PIN: 2714197170 DB. 9312, PG. 1963 BM. 2000, PG. 2209
17	N/F JAMIE LEIGH AND RYAN PATRICK HOAD PIN: 2714189947 DB. 14710, PG. 1017 BM. 2000, PG. 2209
18	N/F BARRY A. GRENSHAW PIN: 2714282739 DB. 8434, PG. 1792 BM. 1999, PG. 1491
19	N/F LINDA W. AND PHILLIP KILLETTE PIN: 2714286726 DB. 8407, PG. 876 BM. 1999, PG. 1491
20	N/F LINDA W. AND PHILLIP KILLETTE PIN: 2714299043 DB. 8407, PG. 888 BM. 1991, PG. 406

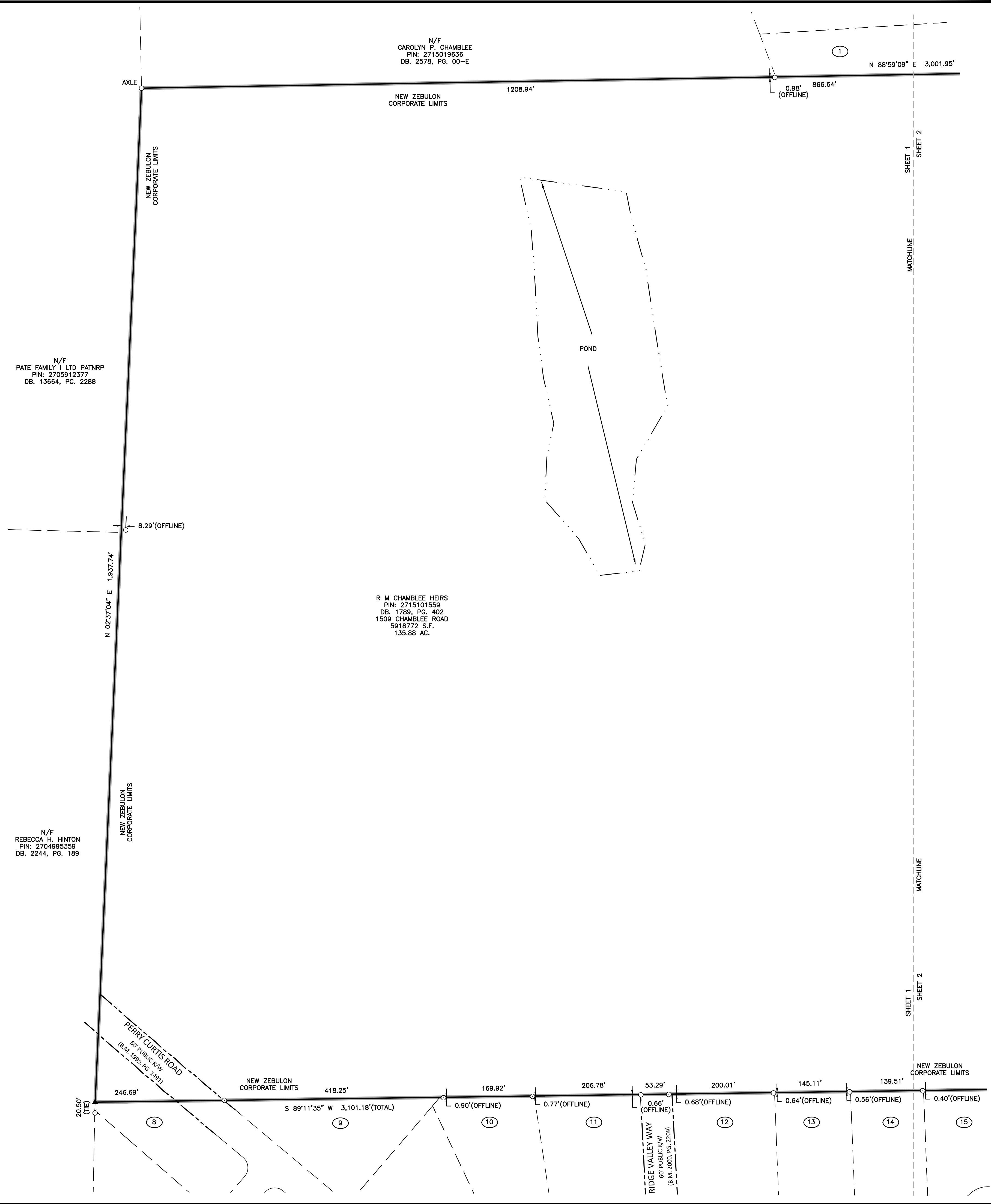
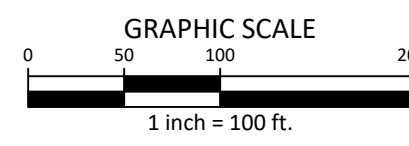


NAD-GRID-[NAD83]2011

NON-CONTIGUOUS ANNEXATION AREA
135.88 ACRES

LEGEND

- EXISTING IRON PIPE OR AXLE
- ▲ CALCULATED POINT
- ANNEXATION LINE



N/F CAROLYN P. CHAMBLEE
PIN: 2715019636
DB. 2578, PG. 00-E

N/F PATE FAMILY I LTD PATNRP
PIN: 2705912377
DB. 13664, PG. 2288

R M CHAMBLEE HEIRS
PIN: 2715101559
DB. 1789, PG. 402
1509 CHAMBLEE ROAD
5918772 S.F.
135.88 AC.

N/F REBECCA H. HINTON
PIN: 2704995359
DB. 2244, PG. 189

McADAMS
The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713
phone 919.361.5000
fax 919.361.2269
license number: C-0293, C-187
www.mcadamsco.com

CLIENT
D.R. HORTON
7208 FALLS OF NEUSE ROAD
SUITE 201
RALEIGH, NORTH CAROLINA 27615

CHAMBLEE ANNEXATION PLAT
1509 CHAMBLEE ROAD
LITTLE RIVER TOWNSHIP, WAKE COUNTY, NORTH CAROLINA

REVISIONS
NO. DATE

PLAN INFORMATION
PROJECT NO. DRH-22004
FILENAME DRH22004-A1
CHECKED BY GCB
DRAWN BY TAM
SCALE 1"=100'
DATE 10-26-2022

SHEET
ANNEXATION PLAT
1-2



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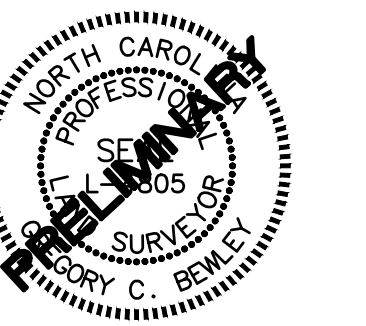
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1509 CHAMBLEE ROAD
LITTLE RIVER TOWNSHIP, WAKE COUNTY, NORTH CAROLINA



REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. DRH-22004
FILENAME DRH22004-A1
CHECKED BY GCB
DRAWN BY TAM
SCALE 1"=100'
DATE 10-26-2022

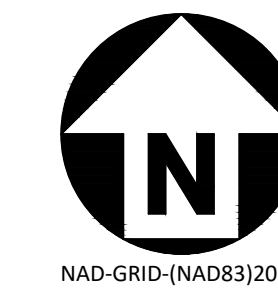
SHEET

ANNEXATION PLAT

2-2

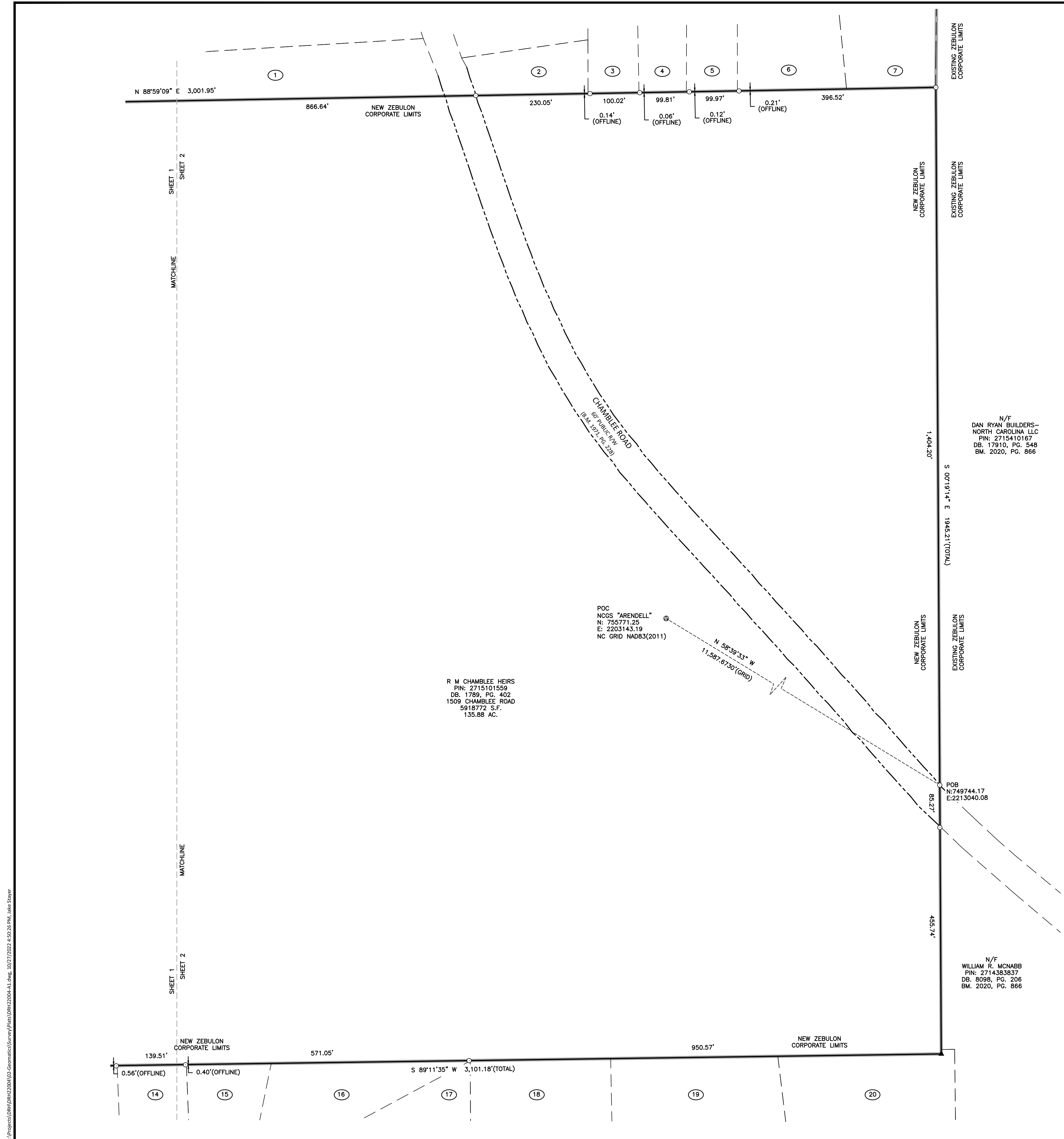
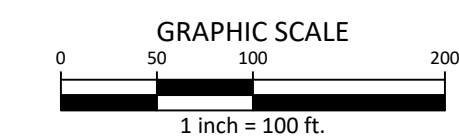
GENERAL NOTES

- 1. SEE SHEET 1 FOR GENERAL NOTES
- 2. SEE SHEET 1 FOR ADJOINER INFORMATION



LEGEND

- EXISTING IRON PIPE OR AXLE
- ▲ CALCULATED POINT
- ANNEXATION LINE



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Dory Meadows

ZEBULON UTILITY ALLOCATION WORKSHEET

BASE POINTS: List of Preferred Land Uses and Required Characteristics:

The uses listed below have been determined to be the most desirable and important uses for the Town of Zebulon to promote and maintain economic and housing diversity. Only projects that completely meet the stated performance characteristics will be considered for utility allocation.

	Use	Points Earned
40 Base Points	<p>Business Office/Finance/Insurance/Professional Services Center - Large Qualifying projects must exceed 100,000 square feet of heated floor space and create at least 150 employment positions that exceed the average annual Wake County salary according to Wake County Economic Development or the Employment Security Commission. Employees perform professional, scientific, and technical services for others. Such services require a high degree of expertise and training and provide high salaried employment opportunities. Examples include software engineering, legal, medical, accounting, consulting, architectural, biomedical, chemical, research and development, and administrative services. Finance or Insurance Centers shall also pool financial risks by underwriting insurance and annuities. Some establishments support employee benefit programs. Examples include bank or credit union headquarters, brokerages, investments, insurance, financing, and data processing establishments.</p>	
40 Base Points	<p>Manufacturing/Industrial Employment Center Manufacturing or Industrial establishments in this category exceed 200,000 square feet of floor space located in plants, factories, or mills and employ power-driven machines and materials-handling equipment. They may also employ workers who assemble or create new products by hand, without the characteristic machinery-intensive enterprise. Many manufacturing establishments process products of agriculture, forestry, fishing, mining, or quarrying as well as products of other manufacturing establishments. Most manufacturing establishments have some form of captive services (e.g., research and development, and administrative operations, such as accounting, payroll, or management) in conjunction on-site.</p>	
40 Base Points	<p>Governmental Uses/Public Administration This category encompasses centers for all government functions; it includes federal, state, and local government agencies that administer, oversee, and manage public programs and budgets and have executive, legislative, or judicial authority. Establishments develop policy, create laws, adjudicate civil and criminal legal cases, and provide for public safety and national defense.</p>	
38 Base Points	<p>Hotels, Motels, or other Accommodation Service Establishments This category serves lodging and short-term accommodations for travelers. They may offer a wide range of services, from overnight sleeping space to full-service hotel suites. They may offer these services</p>	

	in conjunction with other activities, such as entertainment or recreation. Stays in these establishments are generally less than one month. This classification does not include boarding or rooming houses.	
38 Base Points	<p>Arts/Entertainment/Museums</p> <p>These establishments operate facilities or provide services for a variety of cultural, entertainment, and performing art functions. Establishments include those that produce, promote, or participate in live performances, events, or exhibits intended for public viewing; those that preserve and exhibit objects and sites of historical, cultural, or educational interest; and those that operate facilities or provide services to serve activities associated with the aforementioned.</p>	
38 Base Points	<p>Amusement, Sports or Recreational Establishment</p> <p>Establishments in this category operate either indoor or outdoor facilities offering family activities (i.e. sports, recreation, or amusement) and provide services, such as facilitating amusement in places operated by others, operating recreational sports groups and leagues. Examples include golf courses, indoor sports venues, bowling alleys, miniature golf courses, athletic clubs, skating rinks and arcades. This category may be used in conjunction with a commercial or residential development as a mixed use development.</p>	
38 Base Points	<p>Mixed Use Development (Transit Oriented)</p> <p>Newly constructed or substantially rehabilitated collection of vertically mixed retail, office and residential uses in multi-story buildings centered within a one-quarter mile radius of an existing rail or bus transit station or the intersection of First Avenue and Robertson Street in Old Town Knightdale. In order to qualify as mixed use, developments must dedicate at least one-third of the total heated square footage to residential use and the remainder to a mix of retail and office uses. All three use types must be represented and at least 10% of the heated square footage must be dedicated to street level, storefront retail uses.</p>	
38 Base Points	<p>Mixed Use Development (Urban Infill)</p> <p>Newly constructed or substantially rehabilitated collection of vertically mixed retail, office and residential uses in a multi-story building on a previously developed parcel within the corporate limits. In order to qualify as mixed use, developments must dedicate at least one-third of the total heated square footage to residential use and the remainder to a mix of retail and office uses. All three use types must be represented and at least 10% of the heated square footage must be dedicated to street level, storefront retail uses.</p>	
35 Base Points	<p>Mixed Use Development (Greenfield)</p> <p>Newly constructed collection of vertically mixed retail, office and residential uses in a multi-story building or buildings on a previously undeveloped parcel. In order to qualify as mixed use, developments must dedicate at least one-third of the total heated square footage to residential use and the remainder to a mix of retail and office uses. All three use types must be represented and at least 10% of the heated square footage must be dedicated to street level, storefront retail uses.</p>	

30 Base Points	<p>Single Family House (Expedited Subdivision or Recombination) Newly constructed Single Family Homes built upon new lots created via the expedited subdivision (3 or fewer lots) or recombination process.</p>	
30 Base Points	<p>Change of Use This category captures renovation, rehabilitation, up-fit or retrofit of existing buildings or portions of buildings that pre-date this policy and require a code summary sheet, change in building occupancy, certificate of occupancy, building permit and/or building inspections.</p>	
30 Base Points	<p>Housing Services for the Elderly Establishments This category offers housing services for the aged, not requiring a license from the North Carolina Department of Health and Human Services, such as independent retirement housing, multi-unit assisted housing with services (MAHS), and continuing care retirement centers. All facilities must provide, but not necessarily be limited to, the following services/facilities: On-site laundry facilities, on site management, guaranteed transportation services at least four days per week, on-site exercise facilities, on-site computer access, and a clubhouse/common lounge area for all residents.</p>	
28 Base Points	<p>Mixture of Use Development (Retail/Office-Institutional/Commercial) Newly constructed collection of horizontally arranged uses including retail, office-institutional and commercial within a master planned project on a previously undeveloped parcel or parcels totaling at least 10 acres. Mixture of use projects must include at least two (2) use types with at least 25% of the space devoted to each use type included in the development.</p>	
28 Base Points	<p>Retail/Commercial Center Newly constructed center of at least 50,000 square feet, typically containing an anchor such as a grocery store and other smaller spaces and/or outparcels for subordinate uses. Uses are entirely consumer-driven and include all manner of retail, service and office possibilities.</p>	
28 Base Points	<p>Business Office/Finance/Insurance/Professional Services Center – Medium Qualifying projects must exceed 50,000 square feet of heated floor space and create at least 75 employment positions that exceed the average annual Wake County salary according to Wake County Economic Development or the Employment Security Commission. Employees perform professional, scientific, and technical services for others. Such services require a high degree of expertise and training and provide high salaried employment opportunities. Examples include software engineering, legal, medical, accounting, consulting, architectural, biomedical, chemical, research and development, and administrative services. Finance or Insurance Centers shall also pool financial risks by underwriting insurance and annuities. Some establishments support employee benefit programs. Examples include bank or credit union headquarters, brokerages, investments, insurance, financing, and data processing establishments.</p>	

28 Base Points	Warehouse/Distribution/Trucking Center Newly constructed center of at least 500,000 square feet where products and resources are transported to, stored, and delivered from via truck or rail.	
25 Base Points	Business Office/Finance/Insurance/Professional Services Center - Small Qualifying projects 50,000 square feet of heated floor space or less. Employees perform professional, scientific, and technical services for others. Such services require a high degree of expertise and training and provide high salaried employment opportunities. Examples include software engineering, legal, medical, accounting, consulting, architectural, biomedical, chemical, research and development, and administrative services. Finance or Insurance Centers shall also pool financial risks by underwriting insurance and annuities. Some establishments support employee benefit programs. Examples include bank or credit union headquarters, brokerages, investments, insurance, financing, and data processing establishments.	
25 Base Points	Multi-Tenant Retail Center Newly constructed center 50,000 square feet or less, typically containing a more than one tenant space within a single structure. Uses are entirely consumer-driven and include all manner of retail, service and office possibilities	
25 Base Points	Religious Institutions Any facility such as a church, temple, synagogue, mosque or monastery used for worship by a non-profit organization and their customarily related uses.	
20 Base Points	Single Use Retail Newly constructed single use, stand-alone building used primarily for retail, restaurant, or similar commercial use.	
20 Base Points	Single Use Office Newly constructed single use, stand-alone building used primarily for office and professional.	
15 Base Points	Intensive Industrial Uses Uses classified as Special Land Uses within the Industrial Classification.	
10 Base Points	Major Subdivision Any subdivision of land of five (5) or more lots.	10
10 Base Points	Multi-Family Residential & Condo Units	
Board Determination	All Other Uses Not Categorized This category of use captures all other uses not categorized elsewhere. Allocations for such uses are left to the discretion of the Town Council upon recommendation of the Land Use Review Board and acted on a case-by-case basis.	

BONUS POINTS

Proposed projects can gain BONUS POINTS by agreeing to provide any of the following items over and above the UDO or Standard Specification requirements for their development proposal.

NOTE: No bonus points are given for UDO requirements.

CATEGORY 1 – Non-Conformity Abatement and Public Infrastructure Improvements (Max 20 Points)

Section 1A - Abatement of Nonconformities		(Max - 3 points)	Points Earned
	Abatement of any existing non-conforming structures	3	
	Abatement of any existing non-conforming use of land	2	
	Abatement of any existing non-conforming lots	1	
Section 1B - Roadway Infrastructure Not Warranted by TIA/UDO		(Max - 10 points)	
	Construction of full cross section of existing off-site public street	5	
	Nearby intersection improvements	5	
	Traffic signal improvements	4	
	Signage or striping improvements	1	
Section 1C - Off-Site Public Greenway Improvements		(Max - 10 points)	
	Construct more than 4000 linear feet of 10-foot wide path	10	
	Construct more than 3000 linear feet of 10-foot wide path	8	
	Construct more than 2000 linear feet of 10-foot wide path	6	
	Construct more than 1000 linear feet of 10-foot wide path	4	
	Construct 500 to 1000 linear feet of 10-foot wide path	2	

CATEGORY 2. Green Development Standards

(Max 20 Points) ← Please note that the maximum for this section is 20 Pts.

Section 2A - Conservation of Natural Habitat Meeting Active Open Space Requirements as Defined in the UDO		(Max - 10 points)	Points Earned
	One point per acre up to 10 acres	1 - 10	10
Section 2B - Parking Lots and Stormwater SCM's		(Max - 10 points)	
	Structured Parking Facilities - must reduce footprint by 20%	10	
	Stormwater - Restored Riparian Buffer	10	
	Construct a fountain or other stormwater amenity within the BMP/SCM (as approved by Staff)	4	
	Stormwater - Landscaped Green Roof	5	
	Stormwater - Underground capture system for on-site irrigation	5	
	Stormwater - Bioretention	5	
	Stormwater - Wetland	5	
	Exclusive use of porous pavement in parking areas where suitable	2	
	Provision of on-street public parking(1 point per stall up to 5 Max)	1 - 5	5
Section 2C - Building/Site Design		(Max - 20 points)	
Residential Architectural Standards to include the Building Types:			
	House & Townhouse (respectively)*	10	10
	Historic Structure Preservation via Deed Restriction (Determined by TRC)	10	
	Platinum LEED Certification	10	
	Gold LEED Certification	8	
	Silver LEED Certification	6	

	Redevelopment of previously vacant space over 20,000 square feet	6	
	Development or Redevelopment within Downtown Overlay District	6	
	Redevelopment of previously vacant space under 20,000 square feet	5	
	Neighborhood/Subdivision LEED Certification	5	
	Green Homes LEED Certification	5	
	Bronze LEED Certification	4	
	Exclusive use of xeriscaping techniques and drought tolerant species	3	
	EV Charging Stations (two-port)	3	
*Building Types are defined in Article 5 of the Town of Zebulon Unified Development Ordinance.			

CATEGORY 3 – Outdoor Enhancement and Transit Improvements
(Max 20 Points)

Section 3A – Outdoor Enhancement		(Max – 10 points)	Points Earned
	Construction of a Parkway Street Section on a Collector level street	5	
	Construction or Preservation of Gateway Landscaping or Structure (Subject to Comprehensive Plan Consistency and TRC approval)	5	5
	Restoration of Historic Structure (Must be approved by TRC)	5	
	Installation of Fountain or mechanical aeration in stormwater pond	5	
	Outdoor Display of Public Art (Subject to TRC Approval)	4	
	Maintenance of Roadside Gateway Plant Bed (requires maintenance agreement)	3	
	Planting Pollinator Garden (225 Square Foot Minimum)	3	3
	Enhanced Roadside Landscaping (Subject to TRC Approval)	2	
	Construction of a Parkway Street Section on a Local level street	2	
	Installation of Native Shade Tree Species (per Tree)	1	
Section 3B – Transit (Pursuant to location being adjacent to a planned or active transit route)		(Max - 8 points)	
	Provision of more than 50 designated Park & Ride Stalls	8	
	Provision of 25 designated Park & Ride Stalls	5	
	Provision of 10 designated Park & Ride Stalls	3	
	Provision of mass transit easement w/ structure (bus stop with shelter & bench)	2	

CATEGORY 4 - Amenities (Only for Projects with Residential Components)
(Max 20 Points)

Section 4A - Private Greenway		(Max - 3 points)	Points Earned
	Construction of more than 3000 linear feet of 6-foot wide path	3	
	Construction of more than 2000 linear feet of 6-foot wide path	2	
	Construction of more than 1000 linear feet of 6-foot wide path	1	
Section 4B – Pool (Combinations may be approved by TRC)		(Max - 8 points)	
	Olympic Pool and Aquatic Center	8	

	Junior Olympic Pool	5	
	Lap Pool (four lane minimum)	3	
	Resort Style Pool	2	2
	Any Other Pool	1	
Section 4C - Outdoor Deck/Patio		(Max - 3 points)	
	Deck/Patio - More than 3000 square feet	3	
	Deck/Patio - More than 2000 square feet	2	
	Deck/Patio - More than 1000 square feet	1	1
Section 4D - Pool Amenities		(Max - 2 points)	
	Jacuzzi/Hot Tub/Whirlpool	2	
	Water Playground with apparatus	2	2
	Sauna/Steam room	2	
Section 4E - Clubhouse		(Max - 10 points)	
	Commercial Coffee Shop with at least 10 designated public seating spaces	10	
	With full kitchen and over 4000 square feet of meeting space	10	
	With full kitchen and less than 4000 square feet of meeting space	9	
	Meeting space without kitchen more than 3500 square feet	8	
	Meeting space without kitchen 2500 - 3499 square feet	7	
	Meeting Space without kitchen 1500 - 2499 square feet	5	
	Meeting Space without kitchen less than 1500 square feet	4	
	No meeting space, bathrooms and changing rooms only	3	3
Section 4F - Additional Active Recreation		(Max - 10 points)	
	Gymnasium (regulation size indoor basketball court)	10	
	Baseball/Softball Field (regulation size)	5	
	Football/Soccer Field (regulation size)	5	
	Skate Park	5	
	Tennis Courts (two regulation courts, fenced)	5	
	Multi-Use Hardcourt (two regulation basketball courts, fenced)	5	
	Pickleball Court (three regulation courts, fenced)	5	
	Pocket Park - 8,000 square feet	5	5
	IPEMA Certified Playground Equipment	4	4
	Lighted Field of Play for nighttime use	3	
	Electronic Scoreboard or Covered Dugouts or Bleachers	3	
	Community Garden - 15-foot by 15-foot, with water access and potting shed	3	

Total Points Earned
60